Registration Document 2013
including the annual financial report

This translation is a non binding translation into English of the Chairman and Chief Executive Officer's certification issued in French and is provided solely for the convenience of English-speaking readers.

"I certify, after having taken all reasonable measures to this purpose and to the best of my knowledge, that the information contained in this *Document de référence* (Registration Document) is in accordance with the facts and makes no omission likely to affect its import.

I certify, to the best of my knowledge, that the statutory and consolidated financial statements of TOTAL S.A. (the Company) have been prepared in accordance with applicable accounting standards and give a fair view of the assets, liabilities, financial position and results of the Company and of all the entities taken as a whole included in the consolidation, and that the *rapport de gestion* (Management Report) of the Board of Directors as referenced in the cross reference list included on page 383 of this *Document de référence* (Registration Document) presents a fair view of the development and performance of the business and financial position of the Company and of all the entities taken as a whole included in the consolidation, as well as a description of the main risks and uncertainties they are exposed to.

I have received a completion letter from the statutory auditors in which they state that they have audited the information related to the financial situation and the financial statements included in this *Document de référence* (Registration Document), as well as read this *Document de référence* (Registration Document) in its entirety.

The statutory auditors have reviewed the historical financial information contained in this *Document de référence* (Registration Document). The statutory auditors' report on the consolidated financial statements for the year ended December 31, 2013, is included on page 234 of this *Document de référence* (Registration Document) and contains a remark.

Christophe de Margerie
Chairman and Chief Executive Officer

AMF AUTORITÉ DES MARCHÉS FINANCIERS

The French language version of this *Document de référence* (Registration Document) was filed with the French Financial Markets Authority (*Autorité des marchés financiers*) on March 27, 2014 pursuant to Article 212-13 of its general regulations. It may be used in connection with a financial operation if supplemented by a prospectus which will have received the visa of the French Financial Markets Authority. This document has been drawn up by the issuer and is binding for its signatories.

Abbreviations

b:	barrel
cf:	cubic feet
/d:	per day
/y:	per year
€:	euro
$ and/or dollar:	U.S. dollar
t:	metric ton
boe:	barrel of oil equivalent
kboe/d:	thousand boe/d
kb/d:	thousand barrel/d
Btu:	British thermal unit
M:	million
B:	billion
MW:	megawatt
MWp:	megawatt peak (direct current)
TWh:	terawatt hour
AMF:	French Financial Markets Authority
API:	American Petroleum Institute
ERMI:	*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.
FEED:	Front-End Engineering and Design
FPSO:	Floating Production Storage and Offloading
IFRS:	International Financial Reporting Standards
LNG:	liquefied natural gas
LPG:	liquefied petroleum gas
ROE	Return on Equity
ROACE:	Return on Average Capital Employed
SEC:	United States Securities and Exchange Commission
SAGD:	Steam Assisted Gravity Drainage

Conversion table

1 boe = 1 barrel of crude oil = approx. 5,403 cf of gas* in 2013.
1 b/d = approx. 50 t/y
1 t = approx. 7.5 b (for a gravity of 37° API)
1 Bm^3/y = approx. 0.1 Bcf/d
1 m^3 = approx. 35.3 cf
1 t of LNG = approx. 48 kcf of gas
1 Mt/y of LNG = approx. 131 Mcf/d

* This ratio is calculated based on the actual average equivalent energy content of TOTAL's natural gas reserves and is subject to change.

Definitions

The terms "TOTAL" and "Group" as used in this Registration Document refer to TOTAL S.A. collectively with all of its direct and indirect consolidated subsidiaries located in, or outside of France.

Key figures

1. Operating and market data

	2013	2012	2011
Brent ($/b)	108.7	111.7	111.3
Exchange rate (€-$)	1.33	1.28	1.39
European Refinery Margin Indicator (ERMI) ($/t)	17.9	36.0	17.4
Hydrocarbon production (kboe/d)	2,299	2,300	2,346
Liquids (kb/d)	1,167	1,220	1,226
Gas (Mcf/d)	6,184	5,880	6,098
Refinery throughput (kb/d)	1,719	1,786	1,863
Refined products sales (kb/d)[a]	3,418	3,403	3,639

(a) Includes Trading.

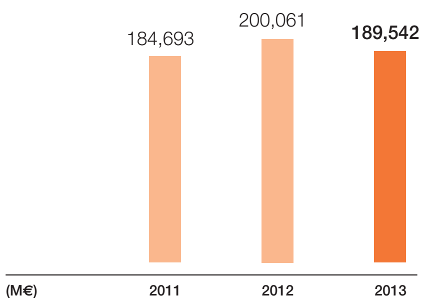
2. Selected financial information

Consolidated data in million euros, except for earnings per share, dividends, number of shares and percentages.

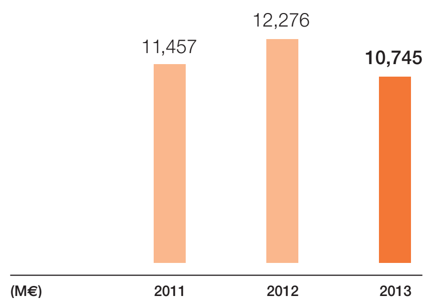
(M€)	2013	2012	2011
Sales	189,542	200,061	184,693
Adjusted operating income from business segments [(a)]	20,779	24,866	24,456
Adjusted net operating income from business segments [(a)]	11,925	13,351	12,295
Net income (Group share)	8,440	10,609	12,309
Adjusted net income (Group share) [(a)]	10,745	12,276	11,457
Fully-diluted weighted-average shares (millions)	2,272	2,267	2,257
Adjusted fully-diluted earnings per share (euros) [(a)(b)]	4.73	5.42	5.08
Dividend per share (euros) [(c)]	2.38	2.34	2.28
Net-debt-to-equity ratio (as of December 31)	23%	22%	23%
Return on Average Capital Employed (ROACE) [(d)]	13%	16%	16%
Return on Equity (ROE)	15%	18%	19%
Cash flow from operations	21,473	22,462	19,536
Investments [(e)]	25,922	22,943	24,541
Divestments	4,814	5,871	8,578

(a) Adjusted results are defined as income using replacement cost, adjusted for special items, excluding the impact of changes for fair value from January 1, 2011.
(b) Based on fully-diluted weighted-average number of common shares oustanding during the period.
(c) Dividend 2013 is subject to approval at the May 16, 2014 Annual Shareholders' Meeting.
(d) Based on adjusted net operating income and average capital employed at replacement cost.
(e) Including acquisitions.

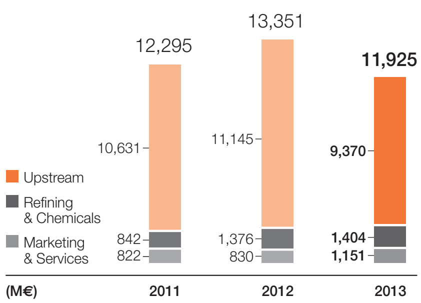
Sales



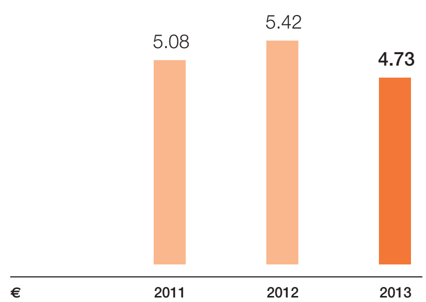
Adjusted net income (Group share) [a]



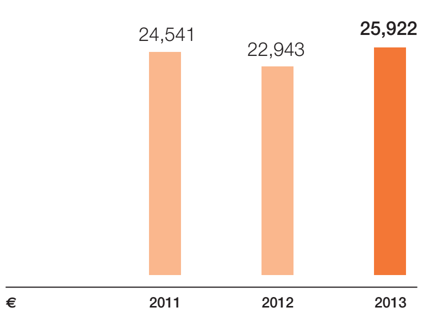
Adjusted net operating income from business segments [a]



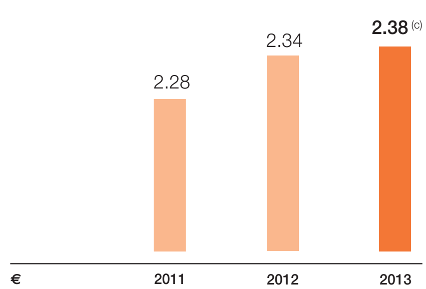
Adjusted fully-diluted earnings per share [a] [b]



Investments [e]

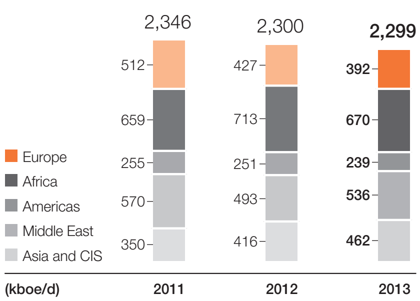


Dividend per share

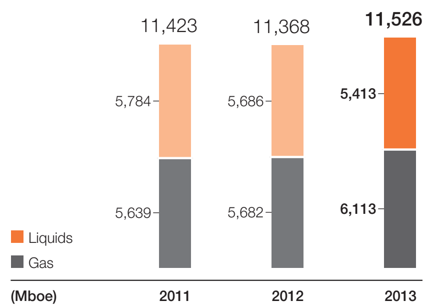


Upstream

Oil and gas production



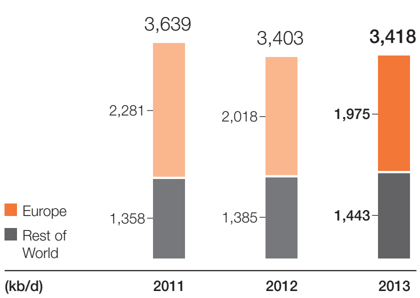
Liquids and gas reserves



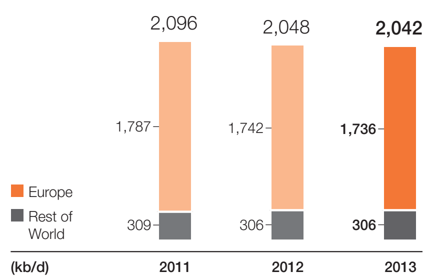
Refining & Chemicals and Marketing & Services

Refined product sales

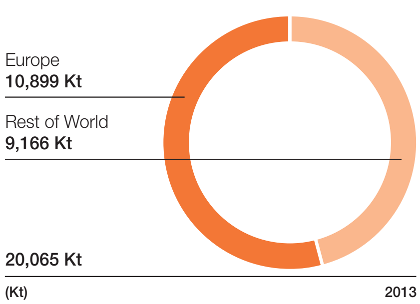
including Trading



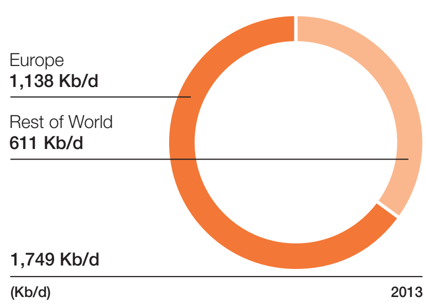
Refining capacity at year-end



Petrochemicals production capacity by geographic area at year end

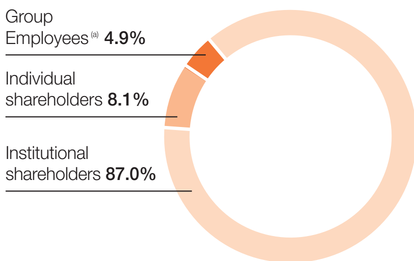


Marketing & Services refined products sales by geographic area in 2013



Shareholder base

Estimates as of December 31, 2013, excluding treasury shares, based on the survey of identifiable holders of bearer shares (TPI) conducted on that date.

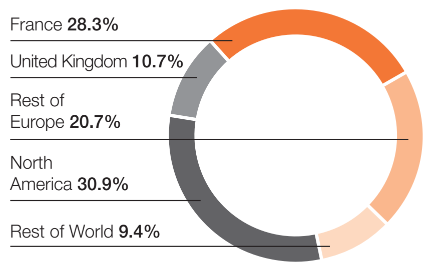


(%) 2013

(a) Based on the definition of employee shareholding pursuant to Article L. 225-102 of the French Commercial Code.

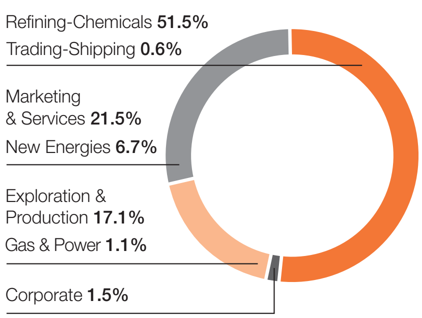
Shareholder base by region

Estimates as of December 31, 2013, excluding treasury shares, based on the survey of identifiable holders of bearer shares (TPI) conducted on that date.



(%) 2013

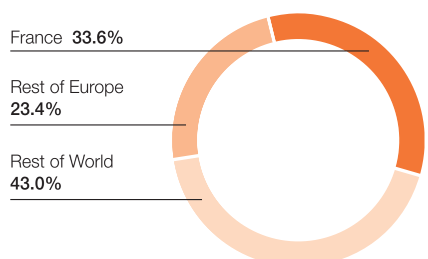
Employees by business segment[a]



(%) 2013

(a) Consolidated companies.
Workforce as of December 31, 2013: 98,799 employees.

Employees by region[a]



(%) 2013

(a) Consolidated companies.
Workforce as of December 31, 2013: 98,799 employees.

Business overview

1. History and strategy of TOTAL

1.1. History and development

TOTAL S.A., a French *société anonyme* (limited company) incorporated on March 28, 1924, together with its subsidiaries and affiliates, is the fifth largest publicly-traded integrated international oil and gas company in the world (1).

With operations in more than 130 countries, TOTAL has activities in every sector of the oil industry: including in the upstream (oil and gas exploration, development and production, liquefied natural gas) and downstream (refining, petrochemicals, specialty chemicals, the trading and shipping of crude oil and petroleum products, marketing). In addition, TOTAL operates in the power generation and renewable energy sectors and has equity stakes in coal mines.

TOTAL began its Upstream operations in the Middle East in 1924. Since that time, the Company has grown and expanded its operations worldwide. In early 1999, the Company acquired control of PetroFina S.A. (hereafter referred to as "PetroFina" or "Fina") and in early 2000, the Company acquired control of Elf Aquitaine S.A. (hereafter referred to as "Elf Aquitaine" or "Elf").

The Company's Corporate name is TOTAL S.A.

The Company's registered office is 2, place Jean Millier, La Défense 6, 92400 Courbevoie, France.

The telephone number is +33 1 47 44 45 46 and the website address is total.com.

TOTAL S.A. is registered in France at the Nanterre Trade Register under the registration number 542 051 180.

1.2. Strategy

TOTAL's activities lie at the heart of the two biggest challenges facing the world now and in future: energy supply and environmental protection. The Group's responsibility as an energy producer is to provide optimum management of these twin imperatives.

TOTAL's strategy, the implementation of which is based on a model for sustainable growth combining the acceptability of operations with a profitable investment program, aims at:

- expanding hydrocarbon exploration and production activities and strengthening its worldwide position as one of the global leaders in the natural gas and LNG markets;
- progressively expanding energy solutions and developing new energies to complement oil and gas;
- adapting its refining and petrochemical base to market changes, focusing on a small number of large, competitive platforms and maximizing the advantages of integration;
- developing its petroleum product marketing business, in particular in Africa, Asia and the Middle East, while maintaining the competitiveness of its operations in mature areas; and
- pursuing research and development to develop "clean" sources of energy, contributing to the moderation of the demand for energy, and participating in the effort against climate change.

(1) Based on market capitalization (in dollars) as of December 31, 2013.

2. Upstream segment

TOTAL's Upstream segment includes the activities of Exploration & Production and Gas & Power. The Group has exploration and production activities in more than fifty countries and produces oil or gas in approximately thirty countries. Gas & Power conducts activities downstream from production related to natural gas, liquefied natural gas (LNG) and liquefied petroleum gas (LPG), as well as power generation and trading, and other activities. Effective July 1, 2012, the Upstream segment no longer includes the activities of New Energies, which are now reported with Marketing & Services. As a result, certain information has been restated according to the new organization.

2.3 Mboe/d
of hydrocarbons produced in 2013

11.5 Bboe
of proved reserves as of December 31, 2013 (1)

€22.4billion
Capital expenditure for 2013

18,054
employees

Upstream segment financial data

(M€)	2013	2012	2011
Non-Group sales	19,855	22,143	22,211
Adjusted operating income (a)	17,854	22,056	22,648
Adjusted net operating income (a)	9,370	11,145	10,631

(a) Adjusted results are defined as income using replacement cost, adjusted for special items, excluding the impact of changes for fair value from January 1, 2011.

Adjusted net operating income from the Upstream segment in 2013 was €9,370 million compared to €11,145 million in 2012, a decrease of 16%. Expressed in dollars, adjusted net operating income from the Upstream segment was 12.4 B$, a decrease of 13%, mainly due to a less favorable production mix, higher technical costs, particularly for exploration, and a higher tax rate for the Upstream segment. The effective tax rate for the Upstream segment was 60.1% in 2013 compared to 58.4% in 2012.

Technical costs(2) for consolidated subsidiaries, in accordance with ASC 932(3), were 26.1 $/boe in 2013, compared with 22.8 $/boe(4) in 2012.

The Return on Average Capital Employed (ROACE(5)) for the Upstream segment was 14% in 2013 compared with 18% in 2012.

Price realizations (a)	2013	2012	2011
Average liquids price ($/b)	103.3	107.7	105.0
Average gas price ($/Mbtu)	7.12	6.74	6.53

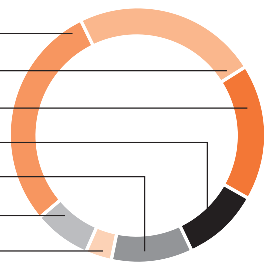
(a) Consolidated subsidiaries, excluding fixed margins. Effective first quarter 2012, included over/under-lifting valued at market prices.

TOTAL's average liquids price decreased by 4% in 2013 compared to 2012 and average gas price increased by 6% in 2013 compared to 2012.

(1) Based on a Brent crude price of $108.02/b.
(2) (Production costs + exploration expenses + depreciation, depletion and amortization and valuation allowances)/production of the year.
(3) FASB Accounting Standards Codification 932, Extractive industries – Oil and Gas.
(4) Excluding IAS 36 (impairment of assets).
(5) Calculated based on adjusted net operating income and average capital employed, using replacement cost.

Production

Hydrocarbon production	2013	2012	2011
Combined production (kboe/d)	2,299	2,300	2,346
Liquids (kb/d)	1,167	1,220	1,226
Gas (Mcf/d)	6,184	5,880	6,098

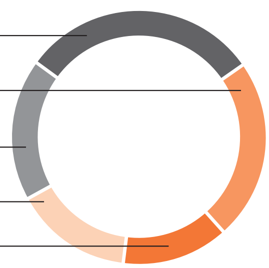


Hydrocarbon production was 2,299 kboe/d in 2013, stable compared to 2012, essentially as a result of:

- +2.5% for start-ups and ramp-ups from new projects;
- -1% for normal decline, partially offset by lower maintenance, the restart of production from Elgin/Franklin in the UK North Sea and OML 58 in Nigeria;
- -0.5% for portfolio changes, including mainly the sale of interests in Nigeria, the UK, Colombia, and Trinidad & Tobago, net of higher production corresponding to the increased stake in Novatek; and
- -1% for security issues in Nigeria and Libya, partially offset by improved security conditions in Yemen.

Reserves

As of December 31,	2013	2011	2010
Hydrocarbon reserves (Mboe)	11,526	11,368	11,423
Liquids (Mb)	5,413	5,686	5,784
Gas (Bcf)	33,026	30,877	30,717



Proved reserves based on SEC rules (based on Brent at 108.02$/b) were 11,526 Mboe at December 31, 2013. Based on the 2013 average rate of production, the reserve life is more than thirteen years. The 2013 proved reserve replacement rate[1], based on SEC rules, was 119%. The 2013 organic proved reserve replacement rate[2] was 109% in a constant price environment. At year-end 2013, TOTAL had a solid and diversified portfolio of proved and probable reserves[3] representing more than twenty years of reserve life based on the 2013 average production rate, and resources[4] representing about fifty years of production.

(1) Change in reserves excluding production (revisions + discoveries, extensions + acquisitions – divestments)/production for the period.
(2) The reserve replacement rate would be 100% in constant environment of 111.13 $/b oil price (reference price in 2012), excluding acquisitions and divestments.
(3) Limited to proved and probable reserves covered by Exploration & Production contracts on fields that have been drilled and for which technical studies have demonstrated economic development in a 100 $/b Brent environment, including projects developed by mining.
(4) Proved and probable reserves plus contingent resources (potential average recoverable reserves from known accumulations – Society of Petroleum Engineers – 03/07).

2.1. Exploration & Production

2.1.1. Exploration and development

TOTAL's Upstream segment aims at continuing to combine long-term growth and profitability at the level of the best actors of the industry.

TOTAL evaluates exploration opportunities based on a variety of geological, technical, political, economic (including taxes and license terms), environmental and societal factors and on projected oil and gas prices. Discoveries of new fields and extensions of existing fields have brought an additional 2,260 Mboe to the Upstream segment's proved reserves during the 3-year period ended December 31, 2013 (before deducting production and sales of reserves in place and adding any acquisitions of reserves in place during this period). The level of revisions during this 3-year period is close to nil (-11 Mboe) since the positive revisions on a large majority of the fields have been significantly impacted by the effects of the increase of the reference oil price (from $79.02/b in 2010 to $108.02/b in 2013 for Brent crude), the variations of the U.S. onshore gas price (from $4.38/MBtu in 2010 to $4.21/MBtu in 2011, $2.85/MBtu in 2012 and $3.67/MBtu in 2013 for Henry Hub) and by a perimeter change in four projects.

In 2013, the exploration investments of consolidated subsidiaries amounted to €2,809 million (including exploration bonuses included in the unproved property acquisition costs). Exploration investments were made primarily in the United States, United Kingdom, Australia, Norway, Iraq, French Guiana, Angola, Kenya, Côte d'Ivoire and Mauritania. In 2012, the exploration investments of consolidated subsidiaries amounted to €2,634 million (including exploration bonuses included in the unproved property acquisition costs). The main exploration investments were made in Angola, the United Kingdom, the United States, Norway, Iraq, Nigeria, Brazil, Malaysia, the Republic of Congo and French Guiana. In 2011, the exploration investments of consolidated subsidiaries amounted to €1,629 million (including exploration bonuses included in the unproved property acquisition costs) notably in Norway, the United Kingdom, Angola, Brazil, Azerbaijan, Indonesia, Brunei, Kenya, French Guiana and Nigeria.

The Group's consolidated Exploration & Production subsidiaries' development investments amounted to €16 billion in 2013, primarily in Norway, Angola, Australia, Nigeria, Canada, United Kingdom, the Republic of the Congo, Gabon, Indonesia, Russia, the United States and Kazakhstan. The Group's consolidated Exploration & Production subsidiaries' development investments amounted to €14 billion in 2012, primarily in Angola, Norway, Canada, Australia, Nigeria, the United Kingdom, Gabon, Kazakhstan, Indonesia, the Republic of the Congo, the United States and Russia. The Group's consolidated Exploration & Production subsidiaries' development investments amounted to €10 billion in 2011, mostly in Angola, Nigeria, Norway, Kazakhstan, the United Kingdom, Australia, Canada, Gabon, Indonesia, the Republic of the Congo, the United States and Thailand.

2.1.2. Reserves

The definitions used for proved, proved developed and proved undeveloped oil and gas reserves are in accordance with the United States Securities & Exchange Commission (SEC) Rule 4-10 of Regulation S-X as amended by the SEC Modernization of Oil and Gas Reporting release issued on December 31, 2008. Proved reserves are estimated using geological and engineering data to determine with reasonable certainty whether the crude oil or natural gas in known reservoirs is recoverable under existing regulatory, economic and operating conditions.

TOTAL's oil and gas reserves are consolidated annually, taking into account, among other factors, levels of production, field reassessments, additional reserves from discoveries and acquisitions, disposal of reserves and other economic factors. Unless otherwise indicated, any reference to TOTAL's proved reserves, proved developed reserves, proved undeveloped reserves and production reflects the Group's entire share of such reserves or such 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. For further information concerning changes in TOTAL's proved reserves for the years ended December 31, 2013, 2012 and 2011, see "Supplemental Oil and Gas Information (Unaudited)" in Chapter 11.

The reserves estimation process involves making subjective judgments. Consequently, estimates of reserves are not exact measurements and are subject to revision under well-established control procedures.

The reserves booking process requires, among other things:

- internal peer reviews of technical evaluations to ensure that the SEC definitions and guidance are followed; and
- that management makes significant funding commitments towards the development of the reserves prior to booking.

For further information regarding the preparation of reserves estimates, see "Supplemental Oil and Gas Information (Unaudited)" in Chapter 11.

2.1.3. Proved reserves for years 2013, 2012 and 2011

In accordance with the amended Rule 4-10 of Regulation S-X, proved reserves at December 31, are calculated using a 12-month average price determined as the unweighted arithmetic average of the first-day-of-the-month price for each month of the relevant year unless prices are defined by contractual arrangements, excluding escalations based upon future conditions. The reference prices for 2013, 2012 and 2011 were, respectively, $108.02/b, $111.13/b and $110.96/b for Brent crude.

As of December 31, 2013, TOTAL's combined proved reserves of oil and gas were 11 526 Mboe (49% of which were proved developed reserves). Liquids (crude oil, condensates natural gas liquids and bitumen) represented approximately 47% of these reserves and natural gas the remaining 53%. These reserves were located in Europe (mainly in Norway and the United Kingdom), in Africa (mainly in Angola, Gabon, Nigeria and the Republic of the Congo), in the Americas (mainly in Canada, Argentina and

Venezuela), in the Middle East (mainly in Qatar, the United Arab Emirates and Yemen), and in Asia (mainly in Australia, Kazakhstan and Russia).

As of December 31, 2012, TOTAL's combined proved reserves of oil and gas were 11,368 Mboe (51% of which were proved developed reserves). Liquids (crude oil, condensates, natural gas liquids and bitumen) represented approximately 50% of these reserves and natural gas the remaining 50%. These reserves were located in Europe (mainly in Norway and the United Kingdom), in Africa (mainly in Angola, Gabon, Libya, Nigeria and the Republic of the Congo), in the Americas (mainly in Canada, Argentina and Venezuela), in the Middle East (mainly in Qatar, the United Arab Emirates and Yemen), and in Asia (mainly in Australia, Kazakhstan and Russia).

As of December 31, 2011, TOTAL's combined proved reserves of oil and gas were 11,423 Mboe (53% of which were proved developed reserves). Liquids (crude oil, condensates natural gas liquids and bitumen) represented approximately 51% of these reserves and natural gas the remaining 49%. These reserves were located in Europe (mainly in Italy, Norway and the United Kingdom), in Africa (mainly in Angola, Gabon, Libya, Nigeria and the Republic of the Congo), in the Americas (mainly in Canada, the United States, Argentina and Venezuela), in the Middle East (mainly in Qatar, the United Arab Emirates and Yemen), and in Asia (mainly in Australia, Indonesia, Kazakhstan and Russia).

2.1.4. Sensitivity to oil and gas prices

Changes in the price used as a reference for the proved reserves estimation result in non-proportionate inverse changes in proved reserves associated with production sharing and risked service contracts (which together represent approximately 25% of TOTAL's reserves as of December 31, 2013). Under such contracts, TOTAL is entitled to a portion of the production, the sale of which is meant to cover expenses incurred by the Group. As oil prices increase, fewer barrels are necessary to cover the same amount of expenses. Moreover, the number of barrels retrievable under these contracts may vary according to criteria such as cumulative production, the rate of return on investment or the income-cumulative expenses ratio. This decrease is partly offset by an extension of the duration over which fields can be produced economically. However, the increase in reserves due to extended field life resulting from higher prices is generally less than the decrease in reserves under production sharing or risked service contracts due to such higher prices. As a result, higher prices lead to a decrease in TOTAL's reserves.

Furthermore, changes in the price used as a reference for the proved reserves estimation have an impact on the volume of royalties in Canada and thus TOTAL's share of proved reserves.

Lastly, for any type of contract, a decrease of the reference price of petroleum products may involve a significant reduction of proved reserves.

2.1.5. Production

For the full year 2013, average daily oil and gas production was 2,299 kboe/d compared to 2,300 kboe/d in 2012 and 2,346 kboe/d in 2011. Liquids accounted for approximately 51% and natural gas for approximately 49% of TOTAL's combined liquids and natural gas production in 2013.

The table on the next page sets forth by geographic area TOTAL's average daily production of liquids and natural gas for each of the last three years.

Consistent with industry practice, TOTAL often holds a percentage interest in its fields rather than a 100% interest, with the balance being held by joint venture partners (which may include other international oil companies, state-owned oil companies or government entities). TOTAL frequently acts as operator (the party responsible for technical production) on acreage in which it holds an interest. See the table "Presentation of production activities by geographic area" on the following pages for a description of TOTAL's producing assets.

As in 2012 and 2011, substantially all of the liquids production from TOTAL's Upstream segment in 2013 was marketed by the Trading & Shipping division of TOTAL's Refining & Chemicals segment (see table "Trading's crude oil sales and supply and refined products sales" on paragraph 3.2.1. of the present Chapter).

The majority of TOTAL's natural gas production is sold under long term contracts. However, its North American production, and part of its production from the United Kingdom, Norway and Argentina, is sold on the spot market. The long-term contracts under which TOTAL sells its natural gas usually provide for a price related to, among other factors, average crude oil and other petroleum product prices, as well as, in some cases, a cost-of-living index. Though the price of natural gas tends to fluctuate in line with crude oil prices, a slight delay may occur before changes in crude oil prices are reflected in long-term natural gas prices. Due to the interaction between the contract price of natural gas and crude oil prices, contract prices are not usually affected by short-term market fluctuations in the spot price of natural gas.

Some of TOTAL's long-term contracts, notably in Argentina, Indonesia, Nigeria, Norway, Qatar and Russia, specify the delivery of quantities of natural gas that may or may not be fixed and determinable. Such delivery commitments vary substantially, both in duration and in scope, from contract to contract throughout the world. For example, in some cases, contracts require delivery of natural gas on an as-needed basis, and, in other cases, contracts call for the delivery of varied amounts of natural gas over different periods of time. Nevertheless, TOTAL estimates the fixed and determinable quantity of gas to be delivered over the period 2014-2016 to be 3,795 Bcf. The Group expects to satisfy most of these obligations through the production of its proved reserves of natural gas, with, if needed, additional sourcing from spot market purchases (see Chapter 11, "Supplemental Oil and Gas Information (Unaudited)" of this Registration Document).

2.1.6. Production by region

	2013			2012			2011		
	Liquids kb/d	Natural gas Mcf/d	Total kboe/d	Liquids kb/d	Natural gas Mcf/d	Total kboe/d	Liquids kb/d	Natural gas Mcf/d	Total kboe/d
Africa	**531**	**699**	**670**	**574**	**705**	**713**	**517**	**715**	**659**
Algeria	5	82	21	6	90	23	16	94	33
Angola	175	62	186	172	44	179	128	39	135
Cameroon	-	-	-	-	-	-	2	1	3
Gabon	55	16	59	54	19	57	55	17	58
Libya	50	-	50	62	-	62	20	-	20
Nigeria	158	511	261	173	521	279	179	534	287
The Congo, Republic of	88	28	93	107	31	113	117	30	123
North America	**28**	**256**	**73**	**25**	**246**	**69**	**27**	**227**	**67**
Canada (a)	13	-	13	12	-	12	11	-	11
United States	15	256	60	13	246	57	16	227	56
South America	**54**	**627**	**166**	**59**	**682**	**182**	**71**	**648**	**188**
Argentina	13	366	78	12	394	83	14	397	86
Bolivia	4	129	28	3	124	27	3	118	25
Colombia	-	-	-	1	23	6	5	27	11
Trinidad & Tobago	2	52	12	4	70	16	4	47	12
Venezuela	35	80	48	39	71	50	45	59	54
Asia-Pacific	**30**	**1,170**	**235**	**27**	**1,089**	**221**	**27**	**1,160**	**231**
Australia	-	25	4	-	29	5	-	25	4
Brunei	2	59	13	2	54	12	2	56	13
China	-	46	8	-	7	1	-	-	-
Indonesia	17	605	131	16	605	132	18	757	158
Myanmar	-	129	16	-	127	16	-	119	15
Thailand	11	306	63	9	267	55	7	203	41
CIS	**32**	**1,046**	**227**	**27**	**909**	**195**	**22**	**525**	**119**
Azerbaijan	5	82	20	4	64	16	4	57	14
Russia	27	964	207	23	845	179	18	468	105
Europe	**168**	**1,231**	**392**	**197**	**1,259**	**427**	**245**	**1,453**	**512**
France	1	45	9	2	58	13	5	69	18
The Netherlands	1	195	35	1	184	33	1	214	38
Norway	136	575	243	159	622	275	172	619	287
United Kingdom	30	416	105	35	395	106	67	551	169
Middle East	**324**	**1,155**	**536**	**311**	**990**	**493**	**317**	**1,370**	**570**
United Arab Emirates	247	71	260	233	70	246	226	72	240
Iran	-	-	-	-	-	-	-	-	-
Iraq	7	1	7	6	-	6	-	-	-
Oman	24	66	37	24	61	37	24	62	36
Qatar	36	558	137	38	560	139	44	616	155
Syria	-	-	-	-	-	-	11	218	53
Yemen	10	459	95	10	299	65	12	402	86
Total production	**1,167**	**6,184**	**2,299**	**1,220**	**5,880**	**2,300**	**1,226**	**6,098**	**2,346**
Including share of equity affiliates	**325**	**1,955**	**687**	**308**	**1,635**	**611**	**316**	**1,383**	**571**
Algeria	-	-	-	-	-	-	10	3	10
Angola	-	16	3	-	-	-	-	-	-
Colombia	-	-	-	-	-	-	4	-	4
Venezuela	35	7	37	38	7	40	44	7	45
United Arab Emirates	240	61	253	225	61	237	219	62	231
Oman	23	66	35	23	60	34	22	62	34
Qatar	8	385	78	7	364	74	8	382	78
Russia	19	962	197	15	844	171	9	465	95
Yemen	-	458	84	-	299	55	-	402	74

(a) The Group's production in Canada consists of bitumen only. All of the Group's bitumen production is in Canada.

2.1.7. Presentation of production activites by region

The table below sets forth, by country, TOTAL's producing assets, the year in which TOTAL's activities commenced, the Group's interest in each asset and whether TOTAL is operator of the asset.

TOTAL's producing assets as of December 31, 2013 [(a)]

	Year of entry into the country	Operated (Group share in %)	Non-operated (Group share in %)
Africa			
Algeria	**1952**		
			Tin Fouye Tabankort (35.00%)
Angola	**1953**		
		Girassol, Jasmim, Rosa, Dalia, Pazflor (block 17) (40.00%)	Cabinda Block 0 (10.00%) Kuito, BBLT, Tombua-Landana (block 14) (20.00%) [(b)]
			Angola LNG (13.60%)
Gabon	**1928**		
		Anguille (100.00%)	
		Anguille Nord Est (100.00%)	
		Anguille Sud-Est (100.00%)	
		Atora (40.00%)	
		Avocette (57.50%)	
		Ayol Marine (100.00%)	
		Baliste (50.00%)	
		Barbier (100.00%)	
		Baudroie Marine (50.00%)	
		Baudroie Nord Marine (50.00%)	
		Coucal (57.50%)	
		Girelle (100.00%)	
		Gonelle (100.00%)	
		Grand Anguille Marine (100.00%)	
		Grondin (100.00%)	
		Hylia Marine (75.00%)	
		Lopez Nord (100.00%)	
		Mandaros (100.00%)	
		M'Boukou (57.5%)	
		M'Boumba (100.00%)	
		Mérou Sardine Sud (50.00%)	
		Pageau (100.00%)	
		Port Gentil Océan (100.00%)	
		Port Gentil Sud Marine (100.00%)	
		Tchengue (100.00%)	
		Torpille (100.00%)	
		Torpille Nord Est (100.00%)	
			Rabi Kounga (47.50%)
Libya	**1959**		
			Zones 15, 16 & 32 (75.00%) [(c)]
			Zones 70 & 87 (75.00%) [(c)]
			Zones 129 & 130 (30.00%) [(c)]
			Zones 130 & 131 (24.00%) [(c)]
Nigeria	**1962**		
		OML 58 (40.00%)	
		OML 99 Amenam-Kpono (30.40%)	
		OML 100 (40.00%)	
		OML 102 (40.00%)	OML 102-Ekanga (40.00%)
		OML 130 (24.00%)	
		OML 138 (20.00%)	
			Shell Petroleum Development Company (SPDC 10.00%)
			OML 118 – Bonga (12.50%)

	Year of entry into the country	Operated (Group share in %)	Non-operated (Group share in %)
The Congo, Republic of	1928		
		Kombi-Likalala-Libondo (65.00%)	
		Moho Bilondo (53.50%)	
		Nkossa (53.50%)	
		Nsoko (53.50%)	
		Sendji (55.25%)	
		Tchendo (65.00%)	
		Tchibeli-Litanzi-Loussima (65.00%)	
		Tchibouela (65.00%)	
		Yanga (55.25%)	
			Loango (50.00%)
			Zatchi (35.00%)
North America			
Canada	1999		
			Surmont (50.00%)
United States	1957		
			Several assets in the Barnett Shale area (25.00%) (d)
			Several assets in the Utica Shale area (25.00%) (d)
			Chinook (33.33%)
			Tahiti (17.00%)
South America			
Argentina	1978		
		Aguada Pichana (27.27%)	
		Aguada San Roque (24.71%)	
		Aries (37.50%)	
		Cañadon Alfa Complex (37.50%)	
		Carina (37.50%)	
		Hidra (37.50%)	
		Kaus (37.5%)	
			Sierra Chata (2.51%)
Bolivia	1995		
			San Alberto (15.00%)
			San Antonio (15.00%)
			Itau (41.00%)
Venezuela	1980		
			PetroCedeño (30.323%)
			Yucal Placer (69.50%)
Asia-Pacific			
Australia	2005		
			Various fields in UJV GLNG (27.50%) (e)
Brunei	1986		
		Maharaja Lela Jamalulalam (37.50%)	
China	2006		
			South Sulige (49.00%)
Indonesia	1968		
		Bekapai (50.00%)	
		Handil (50.00%)	
		Peciko (50.00%)	
		Sisi-Nubi (47.90%)	
		South Mahakam (50.00%)	
		Tambora (50.00%)	
		Tunu (50.00%)	
			Badak (1.05%)
			Nilam-gas and condensates (9.29%)
			Nilam-oil (10.58%)
			Ruby-gas and condensates (15.00%)

	Year of entry into the country	Operated (Group share in %)	Non-operated (Group share in %)
Myanmar	1992		
		Yadana (31.24%)	
Thailand	1990		
			Bongkot (33.33%)
Commonwealth of Independant States			
Azerbaijan	1996		
			Shah Deniz (10.00%)
Kazakhstan	1992		
			Kashagan (16.81%)
Russia	1991		
		Kharyaga (40.00%)	
			Several fields through the participation in Novatek (16.96%)
Europe			
France	1939		
		Lacq (100.00%)	
		Lagrave (100.00%)	
Norway	1965		
		Atla (40.00%)	
		Skirne (40.00%)	
			Åsgard (7.68%)
			Ekofisk (39.90%)
			Ekofisk South (39.90%)
			Eldfisk (39.90%)
			Embla (39.90%)
			Gimle (4.90%)
			Glitne (21.80%)
			Gungne (10.00%)
			Heimdal (16.76%)
			Huldra (24.33%)
			Islay (5.51%)[f]
			Kristin (6.00%)
			Kvitebjørn (5.00%)
			Mikkel (7.65%)
			Morvin (6.00%)
			Oseberg (14.70%)
			Oseberg East (14.70%)
			Oseberg South (14.70%)
			Sleipner East (10.00%)
			Sleipner West (9.41%)
			Snøhvit (18.40%)
			Stjerne (14.70%)
			Tor (48.20%)
			Troll I (3.69%)
			Troll II (3.69%)
			Tune (10.00%)
			Tyrihans (23.145%)
			Vale (24.24%)
			Vilje (24.24%)
			Visund (7.70%)
			Visund South (7.70%)
			Visund North (7.70%)
			Yttergryta (24.50%)

	Year of entry into the country	Operated (Group share in %)	Non-operated (Group share in %)
The Netherlands	1964		
		F6a gaz (55.66%)	
		F6a huile (65.68%)	
		F15a Jurassic (38.20%)	
		F15a/F15d Triassic (32.47%)	
		F15d (32.47%)	
		J3a (30.00%)	
		K1a (40.10%)	
		K1b/K2a (60.00%)	
		K2c (60.00%)	
		K3b (56.16%)	
		K3d (56.16%)	
		K4a (50.00%)	
		K4b/K5a (36.31%)	
		K5b (50.00%)	
		K6/L7 (56.16%)	
		L1a (60.00%)	
		L1d (60.00%)	
		L1e (55.66%)	
		L1f (55.66%)	
		L4a (55.66%)	
		L4d (55.66%)	
			E16a (16.92%)
			E17a/E17b (14.10%)
			J3b/J6 (25.00%)
			Q16a (6.49%)
United Kingdom	1962		
		Alwyn North, Dunbar, Forvie North, Ellon, Grant, Jura Nuggets (100.00%)	
		Elgin-Franklin, West Franklin (EFOG 46.17%)[g]	
		Glenelg (49.47%)	
		Islay (94.49%)[f]	
			Bruce (43.25%)
			Markham unitized fields (7.35%)
			Keith (25.00%)

	Year of entry into the country	Operated (Group share in %)	Non-operated (Group share in %)
Middle East			
U.A.E.	**1939**		
		Abu Dhabi-Abu Al Bu Khoosh (75.00%)	
			Abu Dhabi offshore (13.33%) (h)
			Abu Dhabi onshore (9.50%) (i)
			GASCO (15.00%)
			ADGAS (5.00%)
Iraq	**1920**		
			Halfaya (18.75%) (j)
Oman	**1937**		
			Various fields onshore (block 6) (4.00%) (k)
			Mukhaizna field (block 53) (2.00%) (l)
Qatar	**1936**		
		Al Khalij (100.00%)	
			North Field-Bloc NF Dolphin (24.50%)
			North Field-Bloc NFB (20.00%)
			North Field-Qatargas 2 Train 5 (16.70%)
Yemen	**1987**		
		Kharir/Atuf (block 10) (28.57%)	
			Various fields onshore (block 5) (15.00%)

(a) The Group's interest in the local entity is approximately 100% in all cases except for Total Gabon (58.28%) and certain entities in Abu Dhabi and Oman (see notes b through l below).
(b) Stake in the company Angola Block 14 BV (TOTAL 50.01%).
(c) TOTAL's stake in the foreign consortium.
(d) TOTAL's interest in the joint venture with Chesapeake.
(e) TOTAL's interest in the unincorporated joint venture.
(f) The field of Islay extends partially in Norway. TOTAL E&P UK holds a 94.49% and TOTAL E&P Norge 5.51%.
(g) TOTAL holds a 46.17% indirect interest through its interest in EFOG (company 100% owned by TOTAL).
(h) Through ADMA (equity affiliate), TOTAL has a 13.33% interest and participates in the operating company, Abu Dhabi Marine Operating Company.
(i) Through ADPC (equity affiliate), TOTAL has a 9.50% interest and participates in the operating company, Abu Dhabi Company for Onshore Oil Operation.
(j) TOTAL holds an interest of 18.75% in the consortium.
(k) TOTAL holds an indirect interest of 4.00% in Petroleum Development Oman LLC, operator of Block 6, via its 10% interest in Pohol.
TOTAL also has a 5.54% interest in the Oman LNG facility (trains 1 and 2), and an indirect participation of 2.04% through OLNG in Qalhat LNG (train 3).
(l) TOTAL holds a direct interest of 2.00% in Block 53.

2.1.7.1. Africa

In 2013, TOTAL's production in Africa was 670 kboe/d, representing 29% of the Group's overall production, compared to 713 kboe/d in 2012 and 659 kboe/d in 2011.

In **South Africa**, TOTAL acquired an interest in the 11B-12B license (50%, operator) in September 2013. This license, which covers an area of 19,000 km², is located approximately 175 km south of the South African coast in water depths ranging from 200 m to 1,800 m. The drilling of an exploration well is planned for 2014.

In addition, in August 2013, the Group was granted approval by the South African authorities to convert its technical cooperation license for the Outeniqua Block (100%) into an exploration license, subject to the sale by TOTAL of 20% of its stake, when the corresponding license agreement will have been negociated and signed. The Outeniqua Block, which covers approximately 76,000 km², is located to the southwest of the 11B-12B license in water depths ranging from 400 m to 4,000 m. A 2D seismic campaign of 7,000 km combined with sea bed core drilling activities is expected to be launched.

In **Algeria**, TOTAL's production was 21 kboe/d during 2013, compared to 23 kboe/d in 2012 and 33 kboe/d in 2011. The decline in production between 2011 and 2012 was mainly due to the sale of TOTAL's interest in CEPSA (48.83%), which was completed in July 2011. All of the Group's production in Algeria now comes from the Tin Fouyé Tabenkort (TFT) field (35%). TOTAL also has stakes of 37.75% and 47% in the Timimoun and Ahnet gas development projects, respectively.

- On the TFT field, plateau production was maintained at 170 kboe/d.
- The development of the Timimoun field continued in 2013 and the responses for the main calls for tender (plant construction and drilling devices) have been reviewed. In February 2014, the main contract was allocated. Commercial gas production could start in 2017, with anticipated plateau production of 1.6 Bm³/year (160 Mcf/d). The 3D seismic survey of an area of 2,240 km², which started in December 2012, was completed in July 2013. The data is currently being analyzed.
- Within the framework of the Ahnet project, discussions are continuing between the project partners and the authorities, particularly in light of the provisions of the new 13-02 oil legislation, which provide greater incentives for the development of unconventional hydrocarbons. The anticipated plateau production is 4 Bm³/year (400 Mcf/d) as of 2018.

In **Angola**, the Group's production in 2013 was 186 kboe/d, compared to 179 kboe/d in 2012 and 135 kboe/d in 2011, and comes from Blocks 0, 14 and 17. Recent highlights include the launch of the CLOV project in 2010, the start-up of production on Pazflor in 2011, several discoveries on Blocks 15/06 and 17/06, and, finally, the acquisition of interests in exploration Blocks 25, 39 and 40 in the Kwanza basin.

- Deep-offshore Block 17 (40%, operator) is TOTAL's principal asset in Angola. It is composed of four major hubs: Girassol, Dalia, Pazflor, which are all in production, and CLOV, which is currently being developed. The Pazflor project, consisting of the Perpetua, Zinia, Hortensia and Acacia fields, has achieved plateau production (220 kb/d). The CLOV project, which was launched in 2010, will result in the installation of a fourth Floating Production, Storage and Offloading unit (FPSO) with a production capacity of 160 kbd/d. Production start-up is expected mid-2014.
- On the ultra-deep-offshore Block 32 (30%, operator), the basic engineering studies for the Kaombo project were completed and the final investment decision is expected to be made in the first half of 2014. The project will permit the development of the discoveries made in the southeast portion of the block through two FPSOs with a capacity in excess of 100 kb/d each.
- On Block 14 (20%[1]), 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%) corresponds to the offshore unitization zone between Angola (Block 14) and the Republic of Congo (Haute Mer license). The development of the Lianzi field, which was started in 2012, will be achieved by means of a connection to the existing BBLT platform (Block 14). Production start-up is planned for 2015. TOTAL's interest in the unitized block is held 10% through Angola Block 14 BV and 26.75% through Total E&P Congo.
- On Block 0 (10%), the development of Mafumeira Sul was approved by the partners and the authorities in 2012. This project constitutes the second phase of the development of the Mafumeira field. Production start-up is planned for 2016.
- On Block 15/06 (15%), the development of a first production hub, including the discoveries located in the northwest portion of the block, began in early 2012. In February 2014, TOTAL signed an agreement to sell its entire interest in block 15/06. The closing of this transaction is expected during the first half of 2014.

TOTAL has operations on exploration Blocks 33 (58.67%, operator), 17/06 (30%, operator), 25 (35%, operator), 39 (15%) and 40 (50%, operator). The Group plans to drill pre-salt targets in Blocks 25, 39 and 40 in 2014 in the deep offshore Kwanza basin. TOTAL signed a disposal agreement to reduce its interest in Block 40 to 40%. The closing of this transaction is expected during the first half of 2014.

TOTAL is also developing its LNG activities through the Angola LNG project (13.6%), which includes a gas liquefaction plant near Soyo supplied in particular by the gas associated with production from Blocks 0, 14, 15, 17 and 18. LNG production started in June 2013 but, due to various incidents, the plant has not yet reached full capacity (5.2 Mt/y).

In **Cameroon**, TOTAL no longer holds any exploration or production assets since the sale of its subsidiary Total E&P Cameroun in 2011. Production was 3 kboe/d in 2011.

In **Côte d'Ivoire**, TOTAL is active in four deep offshore exploration licenses located 50 km to 100 km from the coast and covering approximately 5,200 km² at water depths ranging from 1,000 m to 3,000 m.

TOTAL is the operator of the CI-100 (60%) license in the Tano basin and holds stakes in the CI-514 (54%, operator), CI-515 (45%) and CI-516 (45%) licenses in the San Pedro basin.

A comprehensive 3D seismic survey has been conducted on the CI-100 license and an first exploration well (Ivoire-1X) was drilled in early 2013 in the northwest portion of the block at a water depth

(1) Interest held by the company Angola Block 14 BV (TOTAL 50.01%, INPEX Corporation 49.99% since February 2013).

of more than 2,300 m. This well has encountered a good-quality oil horizon. The recorded data is currently undergoing analysis in order to assess the potential of the discovered reservoirs and define an exploration and additional works program.

A 3D seismic survey campaign covering the whole of the three licenses CI-514, CI-515 and CI-516 was completed in December 2012. The interpretation of the data is on going. Following the drilling of a first exploration well on license CI-514, two more wells are due to be drilled on licenses CI-515 and CI-516 during the course of 2014.

In **Egypt**, TOTAL is the operator of Block 4 (East El Burullus Offshore) and reduced its stake in this license from 90% to 50% in January 2013. The license, located in the Nile river basin, covers a 4-year initial exploration period and includes a commitment to carrying out 3D seismic work and drilling exploration wells. Following the 3D seismic campaign covering 3,374 km² that was conducted in 2011, an exploration well (Kala-1) was drilled in late 2013, whose results have been disappointing.

In **Gabon**, the Group's production in 2013 was 59 kboe/d compared to 57 kboe/d in 2012 and 58 kboe/d in 2011. The Group's exploration and production activities in Gabon are mainly carried out by Total Gabon[(1)], one of the Group's oldest subsidiaries in sub-Saharan Africa.

- As part of the Anguille field redevelopment project (estimated production capacity of 20 kboe/d), the AGM North platform, from which twenty-one additional development wells are expected to be drilled, was installed in 2012. Production started as planned with two wells in March 2013.
- On the deep-offshore Diaba license, the operator Total Gabon sold off part of its interest in 2012 and now has a stake of 42.5%. An initial exploration well (Diaman-1B) was drilled during 2013 at a water depth of more than 1,700 m. This well revealed an accumulation of gas and condensates in the pre-salt reservoirs of the Gamba Formation. Data analysis is currently underway in order to assess this discovery and reassess the surrounding prospects.
- The Nguongui-updip well was drilled on the Mutamba-Iroru license (50%) in 2012 and revealed the presence of hydrocarbons. Work is currently being conducted to evaluate the commercial viability of this discovery. A 2D seismic survey was conducted on the Nziembou license (20%) in 2012. Drilling preparation activities are being conducted for a first exploration well scheduled in 2014.

In **Kenya**, TOTAL acquired a 40% stake in five offshore licenses in the Lamu basin in 2011, namely licenses L5, L7, L11a, L11b and L12, representing a total surface area of more than 30,600 km² at water depths of between 100 m and 3,000 m. Following the 3D seismic survey campaign covering 3,500 km² that was conducted during the initial exploration period, 25% of the surface area of the five blocks was relinquished. In 2013, two exploration wells were drilled in Blocks L7 and L11b, but did not result in positive results. In 2012, the results Group also acquired the L22 offshore license (100%, operator), located in the same basin and covering a surface area of more than 10,000 km² in water depths ranging from 2,000 m to 3,500 m. In December 2013, TOTAL sold 30% of its stake in this license. A 2D seismic survey and sea core drilling operations are planned for 2014 on the L22 offshore license.

In **Libya**, the Group's production in 2013 was 50 kb/d compared to 62 kb/d in 2012 and 20 kb/d in 2011. TOTAL is a partner in the following contract zones: 15, 16 & 32 (75%[(2)]), 70 & 87 (75%[(2)]), 129 & 130 (30%[(2)]) and 130 & 131 (24%[(2)]) and Block NC191 (100%[(2)], operator).

Production which, in 2012, had returned to its level prior to the events of 2011 was affected from mid-2013 onward by the blockade of most of the country's terminals and pipelines due to social and political unrest.

- In onshore zones 70 and 87 (Mabruk), production has been affected since August 2013 due to the blockade of the Es Sider export terminal. Development of the Garian field was approved in July 2013 and production at the field is expected to start in the third quarter 2014.
- In onshore zones 129, 130 and 131, production was stopped in 2013 during several months due to the blocking of the production installation and the evacuation pipeline. The seismic survey campaign, which was interrupted in 2011 due to force majeure, has not yet resumed. However, the exploration of these blocks continued in 2013 with the drilling of three wells.
- In the onshore Murzuk basin, a plan for the development of Block NC 191 was submitted to the authorities in 2009. Discussions have resumed following the interruptions associated with the events of 2011.
- In offshore zones 15, 16 and 32 (Al Jurf), production has not been affected by the social unrest in the country. The drilling of two exploration wells scheduled for the second quarter of 2013 was postponed due to technical reasons. The first of these wells was started at the end of 2013.

In **Madagascar**, TOTAL is active on the Bemolanga 3102 license (60%, operator). Since the exploitation of oil sand accumulations is no longer planned, TOTAL is refocusing on the conventional exploration of the block, which is expected to continue in 2014 with a 2D seismic survey following the approval of an additional 2-year extension of the exploration phase by the local authorities.

In **Morocco**, the Anzarane offshore reconnaissance contract covering an offshore zone of 100,000 km², which was granted in December 2011 to TOTAL and ONHYM (National Bureau of Petroleum and Mines), was extended for one year in December 2013. A 3D seismic survey campaign covering 5,900 km² that started in late 2012 was completed in July 2013. The collected data is currently being processed.

In **Mauritania**, the Group has exploration operations on the Ta7 and Ta8 licenses (60%, operator) located in the Taoudenni basin. In 2012, TOTAL acquired interests in two exploration licenses (90%, operator): Block C9 in ultra-deep offshore, and Block Ta29 onshore in the Taoudenni basin. During 2013, TOTAL sold 18% of its stake in Block Ta29, but retains operatorship and a 72% interest.

- Following a 2D seismic survey performed in 2011 on license Ta7, well Ta7-1 was drilled in 2013. Tests have been conducted, but they did not allow to highlight hydrocarbons in commercial quantity.
- On Block Ta29, a 900 km² seismic was performed in 2012. The processing and the interpretation of these seismic data have been completed. Studies are underway to identify a prospect on this block.

(1) Total Gabon is a Gabonese company listed on Euronext Paris. The Group holds 58.28%, the Republic of Gabon holds 25% and the public float is 16.72%.
(2) TOTAL's stake in the foreign consortium.

– A 3D seismic survey campaign covering 4,700 km^2 was conducted on Block C9 in 2013. The data is currently being processed and interpreted.

In **Mozambique**, TOTAL acquired in 2012 a 40% stake in the production sharing contract regarding offshore Blocks 3 and 6. Located in the Rovuma basin, these two blocks cover a total surface area of 15,250 km^2 in water depths ranging from 0 m to 2,500 m. An exploration well was drilled in 2012 and half of the surface area of the two blocks was relinquished in 2013 at the start of the second exploration period.

In **Nigeria**, Group production in 2013 was 261 kboe/d compared to 279 kboe/d in 2012 and 287 kboe/d in 2011. These declines are primarily due to the sharp increase in oil bunkering and in 2013 the blockade of Nigeria LNG export cargos. Despite such factors negatively affecting production, Nigeria remained the main contributor to the Group's production.

TOTAL, which has been present in the country since 1962, operates six production licenses (OML) out of the thirty-eight in which it has a stake, and one out of the four exploration licenses (OPL) in which it is present.

Regarding variations in TOTAL's licenses:

– In September 2013, TOTAL was granted approval by the authorities to increase its stake in exploration license OPL 285 from 26.67% to 60%. In May 2013, TOTAL obtained the approval of the authorities for the renewal of licenses OML 99, 100 and 102 for a period of twenty years.

– On the OML 138 license (20%), TOTAL started production in the Usan offshore field in 2012 (180 kb/d, FPSO capacity), which reached the level of 130 kboe/d in 2013. Since February 2014, TOTAL is no longer the operator of the OML 138 license. In 2012, TOTAL signed an agreement for the sale of its 20% stake in Block OML 138. The approval by the authorities has not yet been received.

– TOTAL decided not to continue its exploration activities in JDZ Block 1 (48.6%, operator) following the analysis of the results of wells drilled in 2012. Block was relinquished in September 2013. Also, the Block OPL 221 was relinquished in November 2013.

– TOTAL sold its 10% stake in Blocks OML 26 and 42 in 2011 and in Blocks OML 30, 34 and 40 in 2012. These interests had previously been indirectly controlled via the joint venture Shell Petroleum Development Company (SPDC).

TOTAL continues, with its developments, to meet the growing domestic demand for gas and to strengthen its ability to supply gas to the LNG projects in which it owns a stake:

– As part of its joint venture with the Nigerian National Petroleum Company (NNPC), TOTAL is pursuing the project to increase the gas production capacity of the OML 58 license (40%, operator) from 370 Mcf/d to 550 Mcf/d.

– On the OML 102 license (40%, operator), TOTAL is continuing to develop the Ofon phase 2 project, which was launched in 2011, with an expected capacity of 70 kboe/d and production start-up is scheduled for the end of 2014. In 2011, the Group also discovered Etisong North, located 15 km from the currently-producing Ofon field. The exploration campaign continued in 2012 with the drilling of the Eben well, which is also south of Ofon. The positive results produced by this well further enhance the interest of the future Etisong-Eben development hub as a satellite of the Ofon field.

– On the OML 130 license (24%, operator), the development of the Egina field (capacity of 200 kboe/d) was launched in June 2013 and contracts have been awarded. Production start-up is expected at year-end 2017.

– On the OML 99 license (40%, operator), engineering work is underway to develop the Ikike field, where production is expected to start in 2017 (estimated capacity of 55 kboe/d).

– On the OML 112/117 licenses (40%), development studies have been suspended waiting for the resolution of contractual issues that arose in 2013.

– TOTAL is also active in the LNG sector with a 15% holding in the company Nigeria LNG, which possesses a liquefaction plant of a total capacity of 22 Mt/y. In addition, TOTAL holds a 17% stake in Brass LNG, which is continuing to study the project for a gas liquefaction plant with two LNG trains of a capacity of 5 Mt/y each.

The production that is not operated by the Group in Nigeria comes mainly from the SPDC joint venture, in which TOTAL holds a 10% stake. The sharp increase of oil bunkering in 2013 had an impact on onshore production, as well as on the integrity of the facilities and the local environment.

In addition, TOTAL also holds a 12.5% stake in the OML 118 deep-offshore license. In connection with this license, the Bonga field contributed 15 kboe/d to Group production in 2013. The partners continued the development of the Bonga Northwest project in 2013. On the OML 118 license, a pre-unitization agreement relating to the Bonga South West discovery has been signed in December 2013.

In **Uganda**, TOTAL has been active since 2012 and holds a 33.33% interest in the EA-1, EA-1A and EA-2 licenses as well as the Kingfisher license. All of these licenses are located in the Lake Albert region, where oil resources have already been discovered. TOTAL is the operator of licenses EA-1 and EA-1A and a partner on the other licenses.

– On the appraisal license EA-1, a campaign of wells, production tests and a 3D seismic survey are underway. Five development plans will be submitted to the authorities before the end of 2014: Ngiri (submitted in December 2013), Jobi-Rii (April 2014), and Mpyo, Gunya and Jobi East (December 2014).

– The EA-1A license expired in February 2013, following a campaign involving the drilling of five exploration wells that resulted in one discovery (Lyec). With the exception of the scope relating to this discovery, the license has been returned to the authorities.

– On the appraisal license EA-2, the campaign of wells and production tests started in 2012 continued during 2013. An additional well is due to be drilled in 2014. Two development plans were submitted to the authorities in June 2013 (Kasamene and Wahrindi fields, as well as those of Kigogole, Ngege, Ngara and Nsoga).

– The development plan for the Kingfisher field, which is located on the EA-3 production license, was approved by the authorities in September 2013. The basic engineering studies are currently being prepared.

– The Kanywataba exploration well was drilled in June 2012 with negative results. The Kanywataba license expired in August 2012 and was returned to the authorities.

At the initiative of the Ugandan government, discussions are underway concerning the construction of a refinery that will be developed in two phases (30 kb/d in the first phase followed by a second phase providing an additional 30 kb/d), as well as an export pipeline.

In the **Republic of Congo**, the Group's production in 2013 was 93 kboe/d compared to 113 kboe/d in 2012 and 123 kboe/d in 2011. The decrease in production was due in particular to the end of plateau production at Moho Bilondo in mid-2010 and to a planned shut-down on the Nkossa field.

– The development of the Lianzi field was approved in 2012. Located in the offshore unitization zone Block 14K (36.75%) between Angola and the Republic of Congo (Haute Mer license), this field will be developed by a tieback to the existing Benguela-Belize-Lobito-Tomboco platform (Block 14 in Angola). Production start-up is expected in 2015. TOTAL's interest in the unitized block is held 26.75% through Total E&P Congo and 10% through Angola Block 14 BV.

– The Moho Bilondo offshore field (53.5%, operator) reached plateau production of 90 kboe/d in mid-2010. The field has now started its decline. The Phase 1b and Moho North projects were launched in March 2013 following agreements on the contractual and fiscal conditions in 2012. Production start-up is planned for 2015 and 2016, respectively, with estimated production capacity of 140 kboe/d (40 kboe/d for Phase 1b and 100 kboe/d for Moho North).

– Production at Libondo (65%, operator), which is part of the Kombi-Likalala-Libondo operating license, started in 2011. Plateau production reached 12 kboe/d in 2011.

– In July 2013, TOTAL obtained the Haute Mer B license (34.62%, operator) in association with other partners.

– As part of the renewal of the Loango and Zatchi licenses, an agreement on the related contractual and fiscal conditions was signed in October 2013. This agreement is subject to approval by the parliament. TOTAL's interest in these licenses will change respectively from 50% to 42.50% for Loango and from 35% to 29.75% for Zatchi with a retroactive effect in October 2013.

– In December 2013, in connection with a share capital increase of Total E&P Congo, Qatar Petroleum International Upstream (QPI) entered into the share capital of this subsidiary at a level of 15%.

In the **Democratic Republic of the Congo,** following the Presidential decree approving TOTAL's entry in 2011 as operator with a 60% interest in Block III of the Graben Albertine, the exploration permit was issued in January 2012 by the Minister of Hydrocarbons for a period of three years and subsequently extended by an additional year due to the postponement of the works in light of the general security situation in the eastern part of the country. This block is located in the Lake Albert region. TOTAL acquired an additional 6.66% of this block in March 2012. The prospecting program is limited to the northern portion of the license, which is outside the Virunga park. A helicopter acquisition of gravimetric and magnetic data was completed in August 2012 with encouraging results. The 2D seismic survey campaign prepared in 2013 is scheduled to start in 2014.

In the **Republic of South Sudan,** TOTAL is negotiating a new contract with the state authorities that would make it possible to resume exploration activities in part of Block B. Since the independence of the Republic of South Sudan on July 9, 2011, TOTAL is no longer present in Sudan.

2.1.7.2. North America

In 2013, TOTAL's production in North America was 73 kboe/d, representing 3% of the Group's total production, compared to 69 kboe/d in 2012 and 67 kboe/d in 2011.

In **Canada,** the Group's production in 2013 was 13 kboe/d compared to 12 kboe/d in 2012 and 11 kboe/d in 2011. The Group's oil sands portfolio is focused around two main hubs: on the one hand, a Steam Assisted Gravity Drainage (SAGD) hub focused on continuing developments at Surmont's (50%), and, on the other, a mining hub, which includes the Joslyn (38.25%, operator), Fort Hills (39.2%) and Northern Lights (50%, operator) mining projects as well as a 100% stake in a number of oil sands leases acquired through a series of auction sales.

– On the Surmont lease, additional wells were drilled in 2013 in order to optimize production. The decision to construct an additional steam generation unit was also made with the same aim in mind. The drilling of additional wells is expected to continue in 2014.

  In early 2010, the partners involved in the project decided to launch the construction of the second development phase. The goal of production start-up from Surmont Phase 2 has been set for 2015 and overall production capacity from the field is expected to increase to 130 kboe/d.

– On the Fort Hills project (production capacity estimated at 180 kb/d), the final investment decision was made in October 2013. Site preparation work is underway and production start-up is planned for the end of 2017.

– On the Joslyn license, engineering studies are currently being conducted in order to optimize production from the Joslyn North Mine project.

– In March 2013, TOTAL concluded an agreement for the sale of its 49% stake in the Voyageur upgrader project.

In the **United States**, the Group's production in 2013 was 60 kboe/d compared to 57 kboe/d in 2012 and 56 kboe/d in 2011.

– In the Gulf of Mexico:

  - Phase 2 of the deep-offshore Tahiti oil field (17%) was launched in 2010. This phase comprises drilling four injection wells and two producing wells. The injection of water started in 2012. The first producing well was put into operation in late 2013 and the second producing well, the drilling of which is currently being completed, is due to start production in 2014.
  - The Chinook 4 well in the deep-offshore Chinook project (33.33%) started production in the third quarter of 2012. Drilling of the Chinook 5 well was completed in 2013 and started production in early 2014.
  - The TOTAL (40%) – Cobalt (60%, operator) alliance's exploratory drilling campaign, which was launched in 2009, was resumed in 2012 after the U.S. government lifted the moratorium on deep-offshore drilling operations. This resulted in the drilling of the Ligurian 2 well (dry well) together with the North Platte well at which a major oil discovery was made and for which studies are currently being conducted. Results from the Ardennes well, which was drilled in 2013, gave disappointing results, just like the Aegean well, which was completed in December 2013. The Aegean well is the last one of the drilling campaign.

– TOTAL is active in shale gas production in Texas and has a 25% stake in the Chesapeake portfolio in the Barnett Shale basin through its participation in a joint venture with Chesapeake. Given the drop in gas prices in the United States, drilling operations have been sharply reduced from 2012 onwards (approximately sixty wells drilled in 2013 compared to 100 in 2012 and more than 300 in 2011).

  TOTAL is also active in the production of shale gas in Ohio and has a 25% stake in the liquid-rich Utica shale gas play through a joint venture with Chesapeake and EnerVest. More than 200 liquids-rich gas wells were drilled in 2013 (compared to approximately 100 in 2012) and approximately 190 of these have been connected and started producing (compared to forty-seven in 2012).

  Engineers from TOTAL are assigned to the teams led by Chesapeake.

– The Group holds a 50% stake in American Shale Oil LLC (AMSO) to develop *in situ* shale oil technology. The first *in situ* heating tests have been performed and are resulting in adaptations to the selected technology.

– In 2012, TOTAL entered into a 50/50 association with Red Leaf Resources for the *ex situ* development of oil shale and agreed to fund a production pilot before any larger-scale development. In addition, TOTAL finalized an agreement to purchase approximately 120 km^2 of additional land in Colorado and Utah, with a view to developing *in situ* shale oil techniques (AMSO technique) or *ex situ* techniques (Red Leaf technique).

In **Mexico**, TOTAL is conducting various studies with state-owned PEMEX under a general technical cooperation agreement renewed in July 2011 for a period of five years.

2.1.7.3. South America

In 2013, TOTAL's production in South America was 166 kboe/d, representing 7% of the Group's total production, compared to 182 kboe/d in 2012 and 188 kboe/d in 2011.

In **Argentina**, where TOTAL has been present since 1978, the Group operated about 30%(1) of the country's production in 2013. The Group's production in 2013 was 78 kboe/d compared to 83 kboe/d in 2012 and 86 kboe/d in 2011. In order to encourage investment in exploration and production, the Argentinean government has concluded gas price agreements with various producers as of December 2012. Under the terms of these agreements, the Argentinean government guarantees the price of gas for quantities above a fixed production level in exchange for compliance with defined production targets and applicable penalties (*i.e.*, "Deliver or Pay"). In February 2013, TOTAL signed an agreement of this type for a period of five years with retroactive effect from December 1, 2012.

– In Tierra del Fuego, the Group notably operates the Carina and Aries offshore fields (37.5%). Following the re-appraisal of the reserves of the Carina field, three additional wells are expected to be drilled from the existing platform. These wells should allow production levels from the facilities operated by the Group in Tierra del Fuego to be maintained at about 630 Mcf/d until the Vega Pleyade field (37.5%, operator) starts up in 2015. Development of this field started in October 2013.

– In the Neuquén basin, TOTAL started a drilling campaign on its mining licenses in 2011 in order to assess their shale gas and oil potential. In 2012 and 2013, this campaign, which started on the Aguada Pichana license (27.3%, operator), was extended to all the blocks operated by the Group: San Roque (24.7%, operator), Rincón la Ceniza and La Escalonada (85%, operator), Aguada de Castro (42.5%, operator), and Pampa de las Yeguas II (42.5%, operator), as well as to the blocks operated by third parties: Cerro Las Minas (40%), Cerro Partido (45%), Rincón de Aranda (45%), and Veta Escondida (45%). The first results, all positive, of the production tests on the wells drilled during this campaign permit envisaging various development scenarios in the region. A pilot development intended to test the unconventional production potential at the Aguada Pichana Block is expected to enter into production in late 2014.

In **Bolivia**, the Group's production, primarily gas, was 28 kboe/d in 2013 compared to 27 kboe/d in 2012 and 25 kboe/d in 2011. TOTAL has stakes in seven licenses: three production licenses, San Alberto and San Antonio (15%) and Block XX Tarija Oeste (41%), two licenses in the development phase, Aquio and Ipati (60%, operator), and two licenses in the exploration or appraisal phase, Rio Hondo (50%) and Azero (50%, operator).

– Production started in 2011 on the Itaú gas and condensates field located on Block XX Tarija Oeste; it is routed to the existing facilities of the neighboring San Alberto field. Phase 2 of the development of the field entered into production at the end of 2013.

– In 2004, TOTAL discovered the Incahuasi gas field on the Ipati Block. In 2011 and 2013, two additional wells confirmed the extension of the discovery northwards onto the adjacent Aquio Block as well as southwards onto the Ipati license. In April 2013, TOTAL was granted approval by the authorities to start development of Phase 1 of the project, including the connection of three existing drilled wells tied to a central processing plant of 6.5 Mm^3/d. The key contracts relating to the construction of the plant and its connection to the export network were granted in October 2013. In July 2013, TOTAL sold 20% stakes in the Aquio and Ipati fields thereby reducing its interest in these fields from 80 to 60%.

– In August 2013, TOTAL acquired a 50% stake in the Azero exploration license in the Andean Piedmont. This is located to the west of the Ipati and Aquio Blocks and covers an area of more than 7,800 km^2.

In **Brazil**, the Group has stakes in fourteen exploration licenses.

– In October 2013, TOTAL acquired a 20% stake in the Libra field. This field is currently being assessed and is the largest pre-salt oil field discovered to date in the Santos basin off the coast of Brazil. The field is located in very deep water (2,000 m) approximately 170 km off the coast of Rio de Janeiro and covers an area of 1,550 km^2. Additional exploration works including contractual obligations to be realized by the end of 2017 and appraisal and development studies of the field were launched.

– Following the eleventh call for tender organized by the Brazilian authorities in May 2013, TOTAL acquired a stake in ten new operating licenses. Holding a 40% stake, the Group operates five blocks (FZA-M-57, FZA-M-86, FZA-M-88, FZA-M-125 and FZA-M-127) located in the Foz do Amazonas basin and has a

(1) Source: Argentinean Ministry of Federal Planning, Public Investment and Services – Energy Secretary.

45% interest in a block (CE-M-661) located in the Ceara basin. TOTAL also has a 25% stake in three blocks (ES-M-669, ES-M-671 and ES-M-743) located in the Espirito Santo basin and a 50% share in another block (BAR-M-346) located in the Barreirinhas basin.

– TOTAL also has a stake in the Xerelete field, which the Group has operated since 2012. This stake is primarily located on Block BC-2 (41.2%) and extends into Block BM-C-14 (50%). The drilling of a well targeting pre-salt horizons was launched at the beginning of January 2014.

– A well was drilled in 2012 in the Gato Do Mato field, which is located in Block BM-S-54 (20%) and was discovered in the Santos basin in 2010. The encouraging results are currently being analyzed in order to define the next stages in the assessment of the field.

In **Colombia**, TOTAL no longer has production since the sale in 2012 of one of its subsidiaries, TEPMA BV, which held a stake in the Cusiana field. Production was 6 kboe/d in 2012 and 11 kboe/d in 2011.

Following the discovery of Huron-1 on the Niscota (50%) license in 2009 and the drilling of the second well, Huron-2, which yielded positive test results in April 2013, a third well, Huron-3, was drilled with disappointing results. The conceptual development studies have started for a declaration of commerciality that is expected during the second quarter of 2014.

After selling 10% of its stake in the Ocensa pipeline in 2011 and reducing its interest in this asset to 5.2%, TOTAL sold its entire stake in 2013, but kept its transport rights. TOTAL has relinquished its stakes in the OAM and ODC pipelines that were previously held by TEPMA BV.

In **French Guiana**, TOTAL owns a 25% stake in the Guyane Maritime license. This license, located approximately 150 km from the coast in water depths ranging from 200 m to 3,000 m, covers an area of approximately 24,000 km². At the end of 2011, the authorities extended the research permit until May 31, 2016.

In 2011, drilling at the GM-ES-1 well, which is located on the Zaedyus prospect at a water depth of more than 2,000 m, revealed two hydrocarbon columns in sandstone reservoirs. Two 3D seismic survey campaigns covering a total area of more than 5,000 km² were conducted in the center and extreme eastern portions of the block in 2012. A drilling campaign consisting of four wells was conducted from July 2012 until the end of 2013. The results of this campaign did not make it possible to prove the extension of an exploitable reservoir but the results did provided additional information that is currently being analyzed.

In **Trinidad and Tobago,** where TOTAL has been active since 1996, the Group's production in 2013 was 12 kboe/d compared to 16 kboe/d in 2012 and 12 kboe/d in 2011. In September 2013, TOTAL sold all of its exploration and production assets by disposing of the companies Total E&P Trinidad BV, which held a 30% stake in the Angostura offshore field located in Block 2C, and Elf Exploration Trinidad BV, which owned an 8.5% share in the adjacent exploration Block 3A. The Group no longer owns any exploration or production assets in the country.

In **Uruguay**, TOTAL holds a 100% stake in three exploration licenses: offshore Block 14, and onshore Blocks B1 and B2.

– In October 2013, TOTAL signed two exploration and production contracts for Blocks B1 and B2 for unconventional plays. These two blocks, which cover a total area of 5,200 km², are primarily located in the Artigas province in the northwestern part of the country. The commitments undertaken in respect of these licenses relate to the conduct of geological, geochemical and environmental studies.

– In 2012, TOTAL acquired a stake in Block 14, which is located approximately 250 km offshore in water depths ranging from 2,000 m to 3,500 m and covers an area of some 6,700 km². In particular, TOTAL agreed to conduct a 3D seismic survey of the entire block, which was completed in early 2014. The Group has also agreed to drill one well in the first 3-year exploration phase.

In **Venezuela**, where TOTAL has had operations since 1980, the Group's production was 48 kboe/d in 2013 compared to 50 kboe/d in 2012 and 54 kboe/d in 2011. TOTAL has equity stakes in PetroCedeño (30.3%), which produces and upgrades extra heavy oil in the Orinoco Belt, in Yucal Placer (69.5%), which produces gas dedicated to the domestic market, and in the offshore exploration Block 4, located in Plataforma Deltana (49%). The development phase of the southern zone of the PetroCedeño field, which started in 2011, is continuing with forty-three producing wells having been drilled at the end of 2013. The postponement of a debottlenecking project in addition with a performance study performed on the field in 2013 led to a revision of PetroCedeño's reserves. Pursuant to an amendment to the gas sale contract, a new development phase of the Yucal Placer field, which is expected to boost the production capacity from 100 Mcf/d to 300 Mcf/d, was launched in June 2012.

2.1.7.4. Asia-Pacific

In 2013, TOTAL's production in Asia-Pacific was 235 kboe/d, representing 10% of the Group's total production, compared to 221 kboe/d in 2012 and 231 kboe/d in 2011.

In **Australia**, the Group produced 4 kboe/d in 2013 compared to 5 kboe/d in 2012 and 4 kboe/d in 2011. TOTAL has held leasehold rights in the country since 2005. The Group owns 30% of the Ichthys project, 27.5% of the Gladstone LNG project (GLNG), and nine offshore exploration licenses off the northwest coast in the Browse, Bonaparte and Carnarvon basins, including five that it operates, as well as four onshore shale gas exploration licenses in the southern part of the South Georgina basin. The acquisition of the fourth license located in the Northern Territory remains subject to the approval of authorities.

– In early 2013, TOTAL acquired an additional 6% in the Ichthys project, increasing its stake to 30%. This project, launched in early 2012, is aimed at the development of the Ichthys gas and condensates field located in the Browse basin. This development includes a floating platform designed for gas production, treatment and export, an FPSO (with a maximum capacity of 100 kb/d of condensates) to stabilize and export condensates, an 889 km gas pipeline and an onshore liquefaction plant (capacities of 8.4 Mt/y of LNG and 1.6 Mt/y of NGL) located in Darwin. The LNG has already been sold mainly to Asian buyers under long-term contracts. Production start-up is expected at year-end 2016.

– TOTAL has an indirect interest of 27.5% in the GLNG project. This integrated gas production, transport and liquefaction project is based on the development of coal gas from the Fairview, Roma, Scotia and Arcadia fields. The final investment decision was made in early 2011 and start-up is expected in 2015. LNG production is expected to eventually reach 7.2 Mt/y. The Upstream development of the project and the construction of the gas pipeline and liquefaction plant are underway.

– In June 2013, the WA-492 and WA-493 licenses in the Carnarvon basin were awarded to TOTAL (100%, operator). TOTAL has undertaken to conduct a 2D seismic survey on these licenses during the coming years.

– At the end of 2012, TOTAL reduced its share in the WA-408 license located in the Browse basin (50%, operator) by disposing of 50% of its stake to partners. Two exploration wells were drilled in 2013. The first well, Bassett West 1, which was drilled during the first half of 2013, highlighted hydrocarbons. Studies are currently underway. The second one, which was completed at the end of 2013, has been definitively abandoned due to the negative results obtained.

– In 2012, TOTAL signed an agreement to enter four shale gas exploration licenses in the South Georgina basin in the center of the country. This agreement, which allows TOTAL to increase its stake to 68% and become the operator in the event of development, has now been finalized. Work started on the three blocks in Queensland during the course of 2013 in the form of a 2D seismic survey that was acquired during the second half of the year. The first exploration wells are due to be drilled during 2014.

– Two wells were drilled in 2011 on the WA-403 license (60%, operator) in the Bonaparte basin. As one well demonstrated the presence of hydrocarbons, additional appraisal work was performed on this block during 2013, including a 3D seismic survey, the results of which are currently being interpreted.

In **Brunei,** where TOTAL has been present since 1986, the Group operates the offshore Maharaja Lela Jamalulalam gas and condensates field located on Block B (37.5%). The Group's production in 2013 was 13 kboe/d compared to 12 kboe/d in 2012 and 13 kboe/d in 2011. The gas is delivered to the Brunei LNG liquefaction plant.

The study of the development project started in 2010 for the production of the new reserves discovered in the south of the field (Maharaja Leila South) was finalized in 2013. The project was officially launched in early 2014 with the execution of most of the related industrial contracts and with the formal signature of the 20-year extension of the present petroleum contract.

Studies are currently being conducted to reassess the potential of deep-offshore exploration Block CA1 (54%, operator) and are expected to result in a new operating strategy. In addition, discussions have started in the perspective of possible unitization with regards to the hydrocarbon identified in the southeast part of the block (Jagus East well) in 2012 and the discovery made by BSP (Geronggong) in a neighboring block.

In **China**, TOTAL has been present since 2006 on the South Sulige Block located in the Ordos basin in the Inner Mongolia province. Following appraisal work by TOTAL, China National Petroleum Corporation (CNPC) and TOTAL agreed to a development plan pursuant to which CNPC is the operator and TOTAL has a 49% stake. The first development wells have been drilled and test-phase production has been underway since August 2012. The Group's production in 2013 was 8 kboe/d compared to 1 kboe/d in 2012.

In March 2013, TOTAL and Sinopec concluded a joint study agreement relating to shale gas potential on the Xuancheng license (4,000 km^2) close to Nanjing. 2D seismic survey activities have been realized from October 2013 to February 2014 (600 km). A drilling campaign is scheduled for 2014 and 2015. If the results of this campaign are favorable, an agreement relating to the long-term development of these resources might subsequently be negotiated with Sinopec.

In **Indonesia**, where TOTAL has had operations since 1968, the Group's production in 2013 was 131 kboe/d compared to 132 kboe/d in 2012 and 158 kboe/d in 2011.

TOTAL's operations in Indonesia are primarily concentrated on the Mahakam permit (50%, operator), which covers in particular the Peciko and Tunu gas fields. TOTAL also has a stake in the Sisi-Nubi gas field (47.9%, operator). The Group delivers most of its natural gas production to the Bontang LNG plant. The overall capacity of the eight liquefaction trains at this plant is 22 Mt/y.

In 2013, TOTAL's gas production operations amounted to 1,757 Mcf/d. This value is down from the 2012 production level (1,871 Mcf/d) due to the maturity of most of the fields on the Mahakam permit, even though this decline was partially offset in 2013 by an increase in production in the South Mahakam fields. The gas operated and delivered by TOTAL accounted for approximately 80% of Bontang's LNG supply. This gas production is supplemented by condensate and oil production from the Handil and Bekapai fields, which are operated by the Group.

– With regard to the Mahakam permit:
  - On the Tunu field, in 2013, additional development wells were drilled in the main reservoir alongside in the shallow gas reservoirs.
  - On the Peciko field, Phase 7 drilling, which started in 2009, is continuing.
  - On South Mahakam, where production started in 2012 and which contains the Stupa, West Stupa and East Mandu condensate gas fields, other development wells are currently being drilled.
  - On the Sisi-Nubi field, which began production in 2007, drilling operations are continuing within the framework of a second phase of development. The gas from Sisi-Nubi is produced through Tunu's processing facilities.

– On the Sebuku license (15%), production started at the Ruby gas field in October 2013. Production capacity is estimated at 100 Mcf/d. Ruby's production is transported by pipeline for processing and separation at the Senipah terminal operated by TOTAL.

– On the Sageri exploration Block (50%), the first exploration well (Lempuk-1X), completed in early 2012, produced negative results. The license is currently being relinquished.

– On the South East Mahakam exploration Block (50%, operator), the Tongkol South-1 exploration well, completed in September 2013, produced negative results.

– In 2013, TOTAL took the necessary steps vis-à-vis the authorities to withdraw from the Sadang (30%), Arafura Sea (24.5%) and Amborip VI (24.5%) Blocks. In addition, and following the withdrawal of the other partners, the Group's stake in the South Sageri Block increased from 45% to 100% (operator), while its share in the South Mandar Block increased from 33% to 49.3%.

– In February 2013, TOTAL sold 10% in the South West Bird's Head exploration Block (90%, operator). This block is located onshore and offshore in the Salawati basin in the province of West Papua. Results from the Anggrek Hitam 1 exploration well, where drilling was completed in September 2013, were negative.

– In 2012, TOTAL acquired a 100% stake in the exploration Block Bengkulu I – Mentawai in the offshore Bengkulu basin, southwest of Sumatra. The preparatory work on the Rendang 1 exploration well started at the end of 2013 and drilling start-up is planned during the first half of 2014. The Group also acquired a stake in the exploration Block Telen (100%, operator) in the offshore Kutai basin in East Kalimantan province.

– In 2011, the Group acquired an 18.4% stake in a coal bed methane (CBM) block on Kutai II in East Kalimantan province as well as a 50% stake in the similar Kutai Timur Block.

In **Malaysia**, on deep-offshore exploration Block SK 317 B (85%, operator), which is located in Sarawak, an exploration well was started in December 2013. Following disappointing geological exploration results, TOTAL withdrew from the PM303 offshore exploration block at the start of 2011 and should do the same for the PM324 license (50%, operator) in May 2014 upon expiration of the operating period. An agreement has been reached with the regulator to convert the second commitment well on PM324 into expenditures on other exploration blocks.

In **Myanmar**, Group production in 2013 was 16 kboe/d compared to 16 kboe/d in 2012 and 15 kboe/d in 2011. TOTAL is the operator of the Yadana field (31.2%). This field, which is located on offshore Blocks M5 and M6, primarily produces gas for delivery to PTT (the Thai state-owned company) for use in Thai power plants. The Yadana field also supplies the domestic market via two pipelines built and operated by MOGE, a Myanmar state-owned company.

In 2012, TOTAL acquired a 40% share in a production sharing agreement on the M-11 offshore Block in the Martaban basin. The first exploration well, Manizawta-1, drilled in 2013 is dry.

In **Papua New Guinea,** TOTAL acquired in 2012 a 40% stake in the PPL234 and PPL244 offshore permits, as well as 50% in the PRL10 offshore permit and an option for 35% of the PPL338 and PPL339 onshore permits. The results of two exploration wells drilled on PPL244 are unsuccessful. An onshore 2D seismic survey was also conducted in 2013.

In March 2014, TOTAL acquired a stake in Block PRL-15 (40.1%) and an option to acquire an interest in exploration Blocks PPL-474, PPL-475, PPL-476 and PPL-477 and in the Triceratops discovery (PRL-39) located in the same zone. The government of Papua New Guinea retains the right to back-in for 22.5% when the final decision is made. In such scenario, TOTAL will hold a 31.1% participating interest when the final decision is made. Block PRL-15 contains two major discoveries: Elk and Antelope.

In the **Philippines,** TOTAL has held since 2012 a 75% stake in the SC56 license in the southern Sulu Sea. The program of operations includes the refurbishment of older seismic lines and a new seismic campaign that was realized at the beginning of 2013. The collected data is currently being interpreted.

In **Thailand,** the Group's production in 2013 was 63 kboe/d compared to 55 kboe/d in 2012 and 41 kboe/d in 2011. This production comes from the Bongkot (33.33%) offshore gas and condensates field. PTT purchases all of the natural gas and condensates production from this field.

– In the northern portion of the Bongkot field, new investments are in progress to allow gas demand to be met and plateau production to be maintained:
  - phase 3J (two wellhead platforms) was launched as scheduled in 2012;
  - phase 3K (two wellhead platforms) was launched as scheduled in 2013;
  - phase 3L (two wellhead platforms) was approved in 2012 with start-up scheduled for 2014;
  - phase 3M (four wellhead platforms) was approved in March 2013 with start-up scheduled for 2015; and
  - the fourth series of low-pressure compressors, which make it possible to boost gas production, was approved in 2012 and start-up is expected in late 2014.

– The southern portion of the field (Greater Bongkot South) is also being developed in several phases. This development is designed to include a processing platform, a residential platform and thirteen production platforms:
  - phase 4A (six well platforms) was launched as scheduled in 2012;
  - phase 4B (four well platforms) is continuing and start-up is scheduled for 2014; and
  - development of phase 4C (three well platforms) will take place following the other two phases.

The exploration on these licenses continues with the drilling of several wells every year (seven in 2013).

In **Vietnam**, the Group no longer possesses any exploration asset following the sale in August 2013 of its stake in offshore Block 15-1/05 (35%).

2.1.7.5. Commonwealth of Independent States (CIS)

In 2013, TOTAL's production in the CIS was 227 kboe/d, representing 10% of total Group production, compared to 195 kboe/d in 2012 and 119 kboe/d in 2011.

In **Azerbaijan**, where TOTAL has been present since 1996 on the Shah Deniz field (10%), production amounted to 20 kboe/d in 2013 and has been growing regularly year-on-year since 2010. TOTAL also has a 10% stake in the South Caucasus Pipeline Company (SCP) gas pipeline, which transports the gas produced at Shah Deniz to the Turkish and Georgian markets. TOTAL also holds a 5% stake in the Baku-Tbilisi-Ceyhan (BTC) oil pipeline, which connects Baku and the Mediterranean Sea and, among other functions, evacuates the condensates from the gas transported from Shah Deniz.

Gas deliveries to Turkey and Georgia continued throughout 2013, at a lower pace for Turkey due to weaker demand than initially expected. As in 2012, however, the Azerbaijan state-owned SOCAR continued to take greater quantities of gas than provided for by the agreement, thus making it possible for the facilities to operate at maximum capacity.

Following the agreements signed in 2011 regarding the sale of additional gas volumes to Turkey and the transfer conditions for volumes intended for the European market, the final investment decision concerning the second phase of development at Shah Deniz was made in December 2013. In September 2013, gas sales agreements representing a total volume of 10 Gm^3/y were signed with European buyers. These volumes are expected to be transported from 2021 through Turkey via the Trans Anatolian pipeline (TANAP) within the framework of a project headed by SOCAR, and via the Trans Adriatic Pipeline (TAP) that is expected transported from 2021 through Turkey via the Trans Anatolian pipeline (TANAP) within the framework of a project headed by SOCAR, and via the Trans Adriatic Pipeline (TAP) that is expected to link Turkey to Italy and in which TOTAL acquired a 10% stake in July 2013.

With regard to the Absheron Block in the Caspian Sea, TOTAL (40%) is the operator during the exploration phase and a joint operating company will manage operations during the development and production phase. A discovery and commerciality declaration was filed in 2012 following a significant discovery in 2011. The development plan for the field is currently being prepared. Discussions are underway for the construction of a drilling rig in the Caspian Sea in order to prepare for the development of this discovery.

In **Kazakhstan**, TOTAL has been active since 1992 through its 16.81% stake in the North Caspian license, which covers the Kashagan field in particular.

The Kashagan project is expected to develop the field in several phases. Production from the first phase (300 kb/d) started on September 11, 2013 and was first halted on September 24, 2013, and then, after having been restarted, a second time on October 9, 2013, due to leaks detected on the gas export pipeline. Investigations are underway in order to identify the origin of these technical malfunctions and to allow production to resume rapidly.

In November 2012, TOTAL acquired a 75% share in the North and South Nurmunai onshore exploration blocks. These two blocks cover an area of 14,600 km² and are located in the southwest of the country. A 2D seismic survey was conducted on each of these blocks in 2013. The data is currently being interpreted and a well is planned to be drilled in 2014.

In **Russia**, where TOTAL has had operations through its subsidiary since 1991, the Group's production in 2013 was 207 kboe/d compared to 179 kboe/d in 2012 and 105 kboe/d in 2011. This production comes from the Kharyaga field and from TOTAL's stake in the Russian company Novatek, which is listed in Moscow and London.

- On the Kharyaga field (40%, operator), work related to the development plan for Phases 3 and 4 is ongoing. This plan aims to maintain plateau oil production above 30 kboe/d. Phase 3 is expected to be completed in 2015 with the end of the flaring of the associated gas.
- In compliance with the strategic partnership agreement signed in 2011 with Novatek, TOTAL continued to increase its share in Novatek to 16.9636% as of December 31, 2013 and intends to further increase its share up to 19.4%.

  TOTAL is currently participating in two projects with Novatek:
- Termokarstovoye: This onshore deposit of gas and condensates is located in the Yamalo-Nenets district. The development and production license for the Termokarstovoye field is owned by ZAO Terneftegas, a joint venture between Novatek (51%) and TOTAL (49%). The development of this field started in late 2011, with production start-up being expected for mid-2015 at a capacity of 65 kboe/d.
- Yamal LNG: The aim of this project, which has been declared to be of national interest by Russian authorities, is to develop the South Tambey gas and condensates field in the Yamal Peninsula and to construct a three-train gas liquefaction plant with an LNG production capacity of 16.5 Mt/y. The first production is expected late 2017. The LNG produced is intended for sale in Europe and Asia using ice-class LNG tankers. The final investment decision was made in December 2013. The company Yamal LNG is jointly-owned by Novatek (60%), TOTAL (20%) and, as of January 2014, CNPC (20%).

  In January 2014, Novatek increased its stake in the company Severenergia (production of 100 kb/d in 2013) by acquiring ENI's shares through the company Arcticgaz (50/50 Joint venture between Novatek and Gazpromneft). In December 2013, Novatek exchanged its interest held in Sibneftegas for the entirety of Rosneft's interests in Severenergia. Since June 2013, Novatek has held a 50% stake in the Nortgaz field.
- In 2013, TOTAL undertook conceptual studies showing that new technical solutions could allow a viable development of the Shtokman field. Discussions with Gazprom for further studies are required to find a technical, contractual and economically viable solution for the development of the Shtokman field.

In **Tajikistan**, TOTAL acquired a 33.3% stake in the Bocktar Block in the first half of 2013. The agreement represents the start of TOTAL's activity in the country. Environmental and societal studies started at the beginning of 2014. The first phase of a seismic campaign covering 800 km is due to start in 2014, with initial drilling operations planned for late 2015.

2.1.7.6. Europe

In 2013, TOTAL's production in Europe was 392 kboe/d, representing 17% of the Group's overall production, compared to 427 kboe/d in 2012 and 512 kboe/d in 2011.

In **Bulgaria**, the Khan Asparuh license, which covers 14,220 km² in the Black Sea, was awarded to TOTAL in 2012. In March 2013, TOTAL sold 60% of its stake and has retained 40% of this block. TOTAL will be the operator as of April 2014. A 2D and 3D seismic survey was performed from June 2013 to January 2014. The data is due to be processed and interpreted in 2014 in order to define drilling objectives in 2015 and 2016.

In **Cyprus**, TOTAL has been present since February 2013 in the deep-offshore exploration Blocks 10 (100%, operator) and 11 (100%, operator) located southwest of the country. A 3D seismic survey was completed on Block 11 in 2013. A 2D seismic survey on Block 10 started in February 2014.

In **Denmark**, TOTAL has, since 2010, owned an 80% stake in and the operatorship of licenses 1/10 (Nordjylland) and 2/10 (Nordsjaelland, formerly Frederoskilde). These onshore licenses, of which the shale gas potential continues to be assessed, cover areas of 3,000 km² and 2,300 km², respectively. Following geoscience surveys on license 1/10 in 2011, the decision was made to drill a well. Initially planned for 2013, this well is now scheduled for 2014 due to additional environmental studies requested by the local authorities. Geoscience studies are ongoing on license 2/10 and a gravimetry acquisition was made in 2013.

In **France**, the Group's production in 2013 was 9 kboe/d compared to 13 kboe/d in 2012 and 18 kboe/d in 2011. TOTAL's major assets are the Lacq (100%) and Meillon (100%) gas fields, located in the southwest part of the country.

On the Lacq field, which started production in 1957, a carbon dioxide capture, injection and storage pilot was commissioned in 2010. In connection with this project, a boiler was modified to operate in an oxy-fuel combustion environment and the CO_2

emitted was captured and re-injected in the depleted Rousse field. As part of TOTAL's Sustainable Development policy, this project allowed the Group to assess one of the technological possibilities for reducing CO_2 emissions. Most of the objectives of the experiment having been reached, the injection of CO_2 came to an end in the first quarter of 2013. For additional information, see Chapter 7. As anticipated, TOTAL ended the operations on Lacq in October, 2013.

The sale agreements of Itteville, Vert-le-Grand, Vert-le-Petit and La Croix Blanche assets were signed in 2011, while those of Dommartin Lettrée, Vic-Bilh, Lacq, Lagrave and Pécorade assets were signed in 2012. The approval of the authorities has been obtained for the sale of all of these licenses, with the exception of the Lacq asset, for which approval is expected to be granted in 2014.

The Montélimar exclusive exploration license awarded to TOTAL in 2010 to assess, in particular, the shale gas potential of the area, was revoked by the government in October 2011. This revocation stemmed from the law of July 13, 2011, prohibiting the exploration and extraction of hydrocarbons by drilling followed by hydraulic fracturing. The Group had submitted the required report to the government in which it undertook not to use hydraulic fracturing in light of the current prohibition. An appeal filed in December 2011 with the administrative court requesting that the judge cancel the revocation of the license is still pending.

In **Italy**, TOTAL holds a stake in two exploration licenses and has an interest in the Tempa Rossa field (50%, operator), discovered in 1989 and located on the Gorgoglione concession (Basilicate region). Although preparation work started in 2008, the proceedings initiated by the Prosecutor of the Potenza Court against Total Italia led to a freeze in the preparation work (for additional information on this dispute, see point 4., Chapter 4, Legal and arbitration proceedings). After resuming the preparation work, the final investment decision was made in July 2012 and production start-up is expected for 2016 at a capacity of 55 kboe/d. Following a call for tenders, all the civil engineering and construction contracts were awarded in 2012 and are currently in progress. The Gorgoglione 2 well was tested in 2012 and confirmed the results obtained from the other wells. The drilling of a sidetrack at well TR-2 started in November 2013.

In March 2013, TOTAL finalized an agreement to sell 25% of the stake acquired in Tempa Rossa in 2011. This transfer, which reduced the Group's holding from 75% to 50%, took place in June 2013 following the approval of the Italian authorities.

In **Norway**, where the Group has had operations since the mid-1960s, TOTAL has equity stakes in 104 production licenses on the Norwegian continental shelf, 31 of which it operates. In 2013, the Group's production was 243 kboe/d, with 74 kboe/d from the Greater Ekofisk Area located in the southern sector of the North Sea, 103 kboe/d from the central and northern portions of the North Sea and 66 kboe/d from the Haltenbanken region (in the Norwegian Sea) and the Barents Sea. The Group's production in Norway in 2012 was 275 kboe/d and 287 kboe/d in 2011.
The decrease in production between 2011 and 2013 was mainly due to the decline of mature fields. Production should increase again and reach a level of around 300 kboe/d at the horizon 2017 with the start-up of several new fields, the developments of which have been launched (Martin Linge, Ekofisk South, Eldfisk II).

– In the Norwegian North Sea, the most substantial contribution to the Group's production, which is for the most part non-operated, comes from the Greater Ekofisk Area (*e.g.*, Ekofisk, Eldfisk, Embla).

  • In the southern Norwegian North Sea:
  In the Greater Ekofisk Area, the Group owns a 39.9% stake in the Ekofisk and Eldfisk fields. The Ekofisk South and Eldfisk 2 projects, each with a capacity of 70 kboe/d, were launched in 2011. Production at Ekofisk South started in October 2013, while start-up at Eldfisk 2 is expected in early 2015. The project relating to the construction and installation of the new Ekofisk accommodation and field services center platform has now been completed and the accommodation has been operational as of November 2013.

  • In the central part of the Norwegian North Sea:
  Gas production start-up at the Atla field, located on license PL102C (40%, operator) and Beta West field (10%), a satellite of Sleipner, took place in October 2012 and April 2011, respectively.

  The development of the Gina Krog structure (38%), formerly known as Dagny and located to the north of Sleipner, was approved in 2013. Production start-up is planned for 2017.
  On license PL036D (24.24%), the fast-track development of Vilje South was launched in 2011. Production start-up is expected in the first half of 2014.

  • In the northern part of the Norwegian North Sea:
  The Islay field (100%, operator) was put into production in 2012. This field extends on each side of the Norwegian/Great Britain border and the Group's interest in the Norwegian part is 5.51%.
  The Stjerne field, located on license PL104 (14.7%), and Visund South field, located on license PL120 (7.7%), were put into production in July 2013 and November 2012, respectively.
  On license PL120 (7.7%), the fast-track development of Visund North, which started in late 2011, made it possible to start production on the field in November 2013.
  On the Greater Hild Area (51%, operator), located in the north, the Martin Linge development scheme was approved by the authorities in 2012, with production start-up scheduled end 2016 at an estimated capacity of 80 kboe/d.
  The Oseberg Delta phase 2 project (14.7%), located on production licenses PL104 and PL79, was approved by the authorities in October 2013 and production start-up is planned for 2015.

– In the Norwegian Sea, the Haltenbanken area includes the Tyrihans (23.2%), Linnorm (20%), Mikkel (7.7%) and Kristin (6%) fields as well as the Åsgard field (7.7%) and its satellites Yttergryta (24.5%) and Morvin (6%).
  The Åsgard sub-sea compression project, which will increase hydrocarbon recovery on the Åsgard and Mikkel fields, was approved by the Norwegian authorities in 2012. All the main contracts have been awarded.
  Development of the Linnorm gas field is still under study following the lower than expected results obtained at the Onyx South exploration well, which was drilled in 2013. It was planned to export the gas from Linnorm to the Nyhamna onshore terminal by installing a new pipeline (Polarled project).
  The Polarled project (5.11%) was approved in December 2012. The project consists of the installation of a 481 km long pipeline from the Aasta Hansen field to the Nyhamna terminal and in the expansion of the terminal.

– In the Barents Sea, a project intended to improve the performance of the Snøhvit liquefaction plant (18.4%, capacity of 4.2 Mt/y) was launched in 2012. This plant is supplied with gas from the Snøhvit, Albatross and Askeladd fields.

Several exploration wells were successfully drilled on a number of licenses during the 2011-2013 period and revealed the presence of hydrocarbons at the structures of Smørbukk North (PL479, 7.68%) and Rhea (PL120, 7.68%) in 2013, Garantiana (PL554, 40%, operator) and King Lear (PL146 and 333, 22.2%) in 2012, and Alve North (PL127, 50%, operator) and Norvarg (PL535, 40%, operator) in 2011. The Novarg appraisal well drilled in 2013 confirmed the presence of gas in the structure, but the well results, which are under study as of December 31, 2013, are below expectations.

In addition, the Group is continuing to optimize its asset portfolio in Norway by obtaining new licenses and divesting a number of non-strategic assets.

In the **Netherlands**, TOTAL has had natural gas exploration and production operations since 1964 and currently owns twenty-four offshore production licenses, including twenty that it operates, and two offshore exploration licenses, E17c (16.92%) and K1c (30%). In 2013, the Group's production was 35 kboe/d compared to 33 kboe/d in 2012 and 38 kboe/d in 2011.

– Following the acquisition of additional stakes at the end of 2013, TOTAL now holds 50% stakes in Block K5b and 60% in Blocks K1b/K2a and K2c. TOTAL is the operator of these three blocks.

– A 3D seismic survey of several offshore permits covering an area of 3,500 km^2 was conducted in 2012. The results of this campaign are currently being interpreted.

– The development project K4-Z (50%, operator) started production in August 2013. This development project was launched in 2011 and consists of two sub-sea wells connected to the existing production and transport facilities.

– The L4-D field (55.66%, operator) started production in 2012.

– Production from the K5-CU project (49%, operator) started in early 2011.

In **Poland**, at the beginning of 2012, TOTAL signed an agreement to acquire a 49% stake in the Chelm and Werbkowice exploration concessions in order to assess their shale gas potential. A well was drilled and tested on the Chelm permit in 2011. The results from the well were analyzed in 2012 and 2013. In December 2013, following the departure of the operator, TOTAL increased its stake to 100% and became the operator of this permit. In 2012, the Werbkowice permit was relinquished.

In the **United Kingdom,** where TOTAL has had operations since 1962, the Group's production in 2013 was 105 kboe/d compared to 106 kboe/d in 2012 and 169 kboe/d in 2011. About 90% of production comes from operated fields located in two major zones: the Alwyn zone in the northern North Sea, and the Elgin/Franklin zone in the Central Graben. In 2012, the shutdown of the Elgin, Franklin and West Franklin fields, due to a gas leak from well G4 in Elgin, severely impacted production. Production at these three fields was resumed in March 2013.

– In the Alwyn zone (100%), the start-up of satellite fields or new reservoir compartments made it possible to compensate in part for the natural decline in production potential. Consequently, wells N54 and N53 were put into production in 2012 and 2011, respectively. Well N55, which was drilled in 2012 in the Brent South West panel, is expected to be put into production in the middle of 2014.

  On the Dunbar field (100%), a new drilling campaign (Dunbar phase IV) is due to begin during the second quarter 2014 and is expected to include three work-overs and six new wells.

  The Islay field (100%, operator) was put into production in 2012. This field extends on each side of the Norwegian/Great Britain border and the Group's interest in the UK portion is 94.49%.

  In 2012, TOTAL finalized the divestment of its stake in the Otter field.

– In Central Graben, TOTAL increased its stake in Elgin Franklin Oil & Gas (EFOG), a company through which it holds an interest in the Elgin and Franklin fields (46.2%, operator), from 77.5% to 100% at the end of 2011. Production at the Elgin, Franklin and West Franklin fields was stopped following a gas leak on the Elgin field in March 2012. In May 2012, TOTAL confirmed that the leak from well G4 had been successfully stopped and, at the end of October 2012, well G4 was definitively secured by installing five cement plugs. The enquiry led by TOTAL permitted the clear identification of the causes of the accident and the definition of new criteria for well integrity to allow the resumption of production at Elgin/Franklin in total safety. Production in the Elgin/Franklin area resumed in March 2013 following the approval of the safety case by the UK Health and Safety Executive (HSE). Production has gradually risen to 55 kboe/d (approximately 25 kboe/d on the Group's account), representing 40% of the production potential of these fields. In order to recover the production level expected before the Elgin incident by 2015, a redevelopment project envisaging the drilling of new infill wells on Elgin and Franklin started in July 2013. Drilling work is due to start on Elgin in early 2015.

  In addition, the West Franklin Phase II development project remains ongoing with production start-up scheduled for mid-2014.

– In addition to Alwyn and the Central Graben, a third area, west of Shetland, is undergoing development. This area covers the fields of Laggan and Tormore (80%, operator) and the P967 license (50%, operator), which includes the Tobermory gas discovery. The decision to develop the Laggan and Tormore fields was made in 2010 and production is scheduled to start in 2014 with an expected capacity of 90 kboe/d. The development scheme includes: sub-sea production facilities; off-gas treatment (gas and condensates) at a plant located near the Sullom Voe terminal in the Shetland Islands, 150 km away; and a new gas pipeline connected to the Frigg gas line (FUKA) for the export of gas to the Saint Fergus terminal.

  In early 2011, a gas and condensate discovery was made on the Edradour East license (75%, operator) near Laggan and Tormore. The decision to develop Edradour East using the existing infrastructure was made at the end of 2012. The Edradour development scheme is currently being optimized in order to include other possible fields in the same zone. Next to the Edradour East discovery, a second well (Spinnaker) started in September 2013 and is currently being drilled.

TOTAL also holds a stake in three assets operated by other parties: the Bruce (43.25%), Keith (25%), and Markham (7.35%) fields.

The Group's stakes in other fields operated by third parties (Seymour, Alba, Armada, Maria, Moira, Mungo/Monan and Everest) were sold off in 2012.

Nine new licenses (three in the northern North Sea, three in Central Graben and three in West Shetland) were awarded to TOTAL in 2012 during the twenty-seventh exploration round.

Early 2014, TOTAL acquired a 40% stake in two shale gas exploration licenses (PEDL 139 et 140) located in the Gainsborough Trough basin of the East Midlands, and signed an agreement that permits the Group to acquire a 50% stake in the licence PEDL 209 located in the same area.

2.1.7.7. Middle East

In 2013, TOTAL's production in the Middle East was 536 kboe/d, representing 23% of the Group's production, compared to 493 kboe/d in 2012 and 570 kboe/d in 2011.

In the **United Arab Emirates,** where TOTAL has had operations since 1939, the Group's production in 2013 was 260 kboe/d compared to 246 kboe/d in 2012 and 240 kboe/d in 2011. In 2013, the country maintained a steady rhythm of production which led to an increase in TOTAL's share of production. The increase in production in 2013 was mainly due to higher production by Abu Dhabi Company for Onshore Oil Operations (ADCO).

TOTAL holds a 75% stake (operator) in the Abu Al Bu Khoosh field, a 9.5% stake in ADCO, which operates the five major onshore fields in Abu Dhabi, and a 13.3% stake in Abu Dhabi Marine (ADMA), which operates two offshore fields. TOTAL also has a 15% stake in Abu Dhabi Gas Industries (GASCO), which produces NGL (natural gas liquids) and condensates from the associated gas produced by ADCO as well as from the gas and condensates and associated gases produced by ADMA. TOTAL also has a 5% stake in Abu Dhabi Gas Liquefaction Company (ADGAS), which processes the associated gas produced by ADMA in order to produce LNG, NGL and condensates, and further possesses a 5% holding in National Gas Shipping Company (NGSCO), which owns eight LNG tankers and exports the LNG produced by ADGAS.

The ADCO license expired in January 2014 and the Abu Dhabi authorities have issued a call for tenders for the renewal of the license as of January 1, 2015.

The Group holds a 24.5% stake in Dolphin Energy Ltd. in partnership with Mubadala, a company owned by the government of Abu Dhabi, in order to market gas produced in Qatar primarily to the United Arab Emirates.

The Group also owns 33.33% of Ruwais Fertilizer Industries (FERTIL), which produces urea. The FERTIL 2 project was started in July 2013 and enabled FERTIL to more than double its production capacity to 2 Mt/y.

In **Iraq,** the Group's production was 7 kboe/d in 2013 compared to 6 kboe/d on average for the year 2012. TOTAL holds an 18.75% stake in the consortium that was awarded the development and production contract for the Halfaya field in the Missan province. Production of Phase 1 of the project, which has a capacity of 100 kb/d, started in June 2012. Phase 2, under construction, is expected to increase the production up to 200 kb/d by the end of 2014. The definitive development plan, which is expected to make it possible to achieve a plateau of 535 kb/d, was approved by the authorities in August 2013.

In early 2013, TOTAL acquired an 80% stake and became operator of the Baranan exploration Block (729 km^2, southeast of Soulaymaniyah, in the Kurdistan area). A 2D seismic survey of 213 km was completed in January 2014. The data of this seismic is expected to result in the drilling of a first exploration well at the end of 2014

Since 2012, TOTAL has held a 35% stake in the Safen and Harir exploration Blocks (424 km^2 and 705 km^2, respectively, located to the northeast of Erbil), as well as a 20% stake in the Taza Block (505 km^2, located southwest of Sulaymaniyah). During 2013, four exploration wells were drilled and resulted in two discoveries located in the Taza and Harir Blocks. The drilling of five new wells is planned for 2014 on three of these four blocks. In early 2014, TOTAL increased its stake in the Safen Block to 80% and became the operator.

In **Iran,** the Group has had no production since 2010. For further information on TOTAL and Iran, see Chapter 4 (Risk factors).

In **Oman,** the Group's production in 2013 was 37 kboe/d, stable compared to 2012 and 2011. TOTAL primarily produces oil on Block 6 (4%)(1) as well as on Block 53 (2%)(2), and it also produces LNG through its stake in the Oman LNG (5.54%)/Qalhat LNG (2.04%)(3) liquefaction plant, which has a capacity of 10.5 Mt/y. In December 2013, TOTAL obtained the license for ultra-deep-offshore Block 41.

In **Qatar,** where TOTAL has had operations since 1936, the Group's production in 2013 was 137 kboe/d compared to 139 kboe/d in 2012 and 155 kboe/d in 2011. The Group has equity stakes in the Al Khalij field (40%), the NFB Block (20%) in the North field, the Qatargas 1 liquefaction plant (10%) and train 5 of Qatargas 2 (16.7%).

- In 2012, TOTAL and state-owned Qatar Petroleum signed a new agreement to continue their partnership on the Al Khalij field for an additional 25-year period as of 2014. TOTAL will continue to be the operator (40%) alongside Qatar Petroleum (60%).
- The production contract for the Dolphin gas project, signed in 2001 with Qatar Petroleum, provides for the sale of 2 Bcf/d of gas from the North Field for a 25-year period. The gas is processed in the Dolphin plant in Ras Laffan and exported to the United Arab Emirates through a 360 km gas pipeline.
- The production capacity of train 5 of Qatargas 2 is 8 Mt/y. TOTAL has been a shareholder in this train since 2006. An agreement to share the two liquefaction trains of the Qatargas 2 project (trains 4 and 5) was signed in 2011. The agreement provides for an equal split of the physical production of the two trains as well as of the associated operating costs and capital outlay. In addition, TOTAL offtakes part of the LNG produced in compliance with the contracts signed in 2006, which provide for the purchase of 5.2 Mt/y of LNG from Qatargas 2 by the Group.

The Group became a partner in the offshore BC exploration permit (25%) in 2011. The first exploration well is due to be drilled during the first half of 2014.

(1) TOTAL holds an indirect interest of 4% in Petroleum Development Oman LLC, operator of Block 6, via its 10% interest in Pohol.
(2) TOTAL holds an indirect interest of 2% in Block 53.
(3) TOTAL's indirect stake in Qalhat LNG through its stake in Oman LNG.

In **Syria,** TOTAL has a 100% stake in the Deir Ez Zor permit, which is operated by the joint-venture company DEZPC in which TOTAL and the state-owned company SPC each have a 50% share. TOTAL also holds the Tabiyeh contract, which came into effect in 2009. The Group had no production in the country in 2013 or in 2012 compared to 53 kboe/d in 2011. TOTAL suspended its activities contributing to the production of hydrocarbons in Syria in December 2011, in compliance with the European Union's regulations regarding this country. For additional information, see Chapter 4 (Risk Factors).

In **Yemen,** where TOTAL has had operations since 1987, the Group's production was 95 kboe/d in 2013 compared to 65 Kboe/d in 2012 and 86 kboe/d in 2011.

TOTAL owns a 39.62% stake in the Yemen LNG liquefaction plant (capacity of 6.7 Mt/y), which is located in Balhaf on the country's southern coast. This plant is supplied with the gas produced on Block 18, located near Marib in the center of the country, via a 320 km gas pipeline. The Balhaf plant suffered two rocket attacks in December 2013 and January 2014, but production was not impacted because one of the rockets resulted in slight damage and the other landed in the sea. Security measures have since been adapted due to the evolving risks.

TOTAL also has stakes in two oil basins, as the operator of Block 10 (Masila Basin, East Shabwa license, 28.57%) and as a partner on Block 5 (Marib basin, Jannah license, 15%).

TOTAL owns stakes in five onshore exploration licenses: 40% in Blocks 69 and 71, 50.1% in Block 70 (operator); 36% in Block 72 (operator); and 40% in Block 3 (operator).

2.1.8. Oil and gas acreage

As of December 31, (in thousands of acres at year-end)		2013 Undeveloped acreage[(a)]	2013 Developed acreage	2012 Undeveloped acreage[(a)]	2012 Developed acreage	2011 Undeveloped acreage[(a)]	2011 Developed acreage
Europe	Gross	10,804	722	10,015	724	6,478	781
	Net	5,305	163	6,882	176	3,497	185
Africa	Gross	134,157	1,266	135,610	1,256	110,346	1,229
	Net	86,493	341	88,457	337	65,391	333
Americas	Gross	19,790	960	16,604	1,705	15,454	1,028
	Net	9,391	286	6,800	330	5,349	329
Middle East	Gross	33,242	1,482	32,369	1,896	31,671	1,461
	Net	4,534	192	3,082	256	2,707	217
Asia	Gross	55,980	1,064	37,208	955	40,552	930
	Net	29,880	309	18,184	270	19,591	255
Total	Gross	253,973	5,494	231,806	6,536	204,501	5,429
	Net[(b)]	135,603	1,291	123,405	1,369	96,535	1,319

(a) Undeveloped acreage includes leases and concessions.
(b) Net acreage equals the sum of the Group's equity stakes in gross acreage.

2.1.9. Number of productive wells

As of December 31, (wells at year-end)		2013 Gross productive wells	2013 Net productive wells[(a)]
Europe	Oil	403	106
	Gas	286	87
Africa	Oil	2,269	615
	Gas	156	48
Americas	Oil	868	266
	Gas	3,311	634
Middle East	Oil	6,283	441
	Gas	295	36
Asia	Oil	229	81
	Gas	2,306	741
Total	Oil	10,052	1,509
	Gas	6,354	1,546

(a) Net well equal the sum of the Group's equity stakes in gross wells.

2.1.10. Number of net productive and dry wells drilled

As of December 31, (wells at year-end)	2013 Net productive wells drilled [(a) (b)]	2013 Net dry wells drilled [(a) (c)]	2013 Net total wells drilled [(a) (c)]	2012 Net productive wells drilled [(a) (b)]	2012 Net dry wells drilled [(a) (c)]	2012 Net total wells drilled [(a) (c)]	2011 Net productive wells drilled [(a) (b)]	2011 Net dry wells drilled [(a) (c)]	2011 Net total wells drilled [(a) (c)]
Exploratory									
Europe	1.5	0.2	1.7	0.9	3.3	4.2	1.5	1.7	3.2
Africa	1.5	5.1	6.6	4.9	2.8	7.7	2.9	1.5	4.4
Americas	2.9	1.4	4.3	3.9	0.6	4.5	1.2	1.3	2.5
Middle East	0.6	0.7	1.3	-	-	-	1.2	0.8	2.0
Asia	1.6	4.3	5.9	2.4	1.4	3.8	2.1	3.7	5.8
Total	**8.1**	**11.7**	**19.8**	**12.1**	**8.1**	**20.2**	**8.9**	**9.0**	**17.9**
Development									
Europe	6.9	0.3	7.2	6.0	0.7	6.7	7.5	-	7.5
Africa	19.7	0.4	20.1	22.7	-	22.7	24.7	-	24.7
Americas	98.0	-	98.0	70.6	-	70.6	113.1	-	113.1
Middle East	42.7	0.3	43.0	43.3	-	43.3	32.6	2.6	35.2
Asia	198.0	-	198.0	127.8	-	127.8	118.4	-	118.4
Total	**365.3**	**1.0**	**366.3**	**270.4**	**0.7**	**271.1**	**296.3**	**2.6**	**298.9**
Total	**373.4**	**12.7**	**386.1**	**282.5**	**8.8**	**291.3**	**305.2**	**11.6**	**316.8**

(a) Net wells equal the sum of the Company's fractional interests in gross wells.
(b) Includes certain exploratory wells that were abandoned, but which would have been capable of producing oil in sufficient quantities to justify completion.
(c) For information: service wells and stratigraphic wells drilled within oil sands operations in Canada are not reported in this table (86.2 wells in 2013, 131.7 in 2012 and 82.2 in 2011).

2.1.11. Exploratory and development wells in the process of being drilled (including wells temporarily suspended)

As of December 31, (wells at year-end)	2013 Gross [(a)]	2013 Net [(a) (b)]
Exploratory		
Europe	2	1.5
Africa	31	9.8
Americas	15	6.7
Middle East	10	3.6
Asia	15	5.7
Total	**73**	**27.3**
Development		
Europe	35	13.4
Africa	27	7.7
Americas	348	120.7
Middle East	129	15.8
Asia	821	246.1
Total	**1,360**	**403.7**
Total	**1,433**	**431.0**

(a) 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", above, for the year in which they are drilled.
(b) Net wells equal the sum of the Group's equity stakes in gross wells.

2.1.12. Interests in pipelines

The table below sets forth TOTAL's interests in oil and gas pipelines as of December 31, 2013.

Pipeline(s)	Origin	Destination	% interest	Operator	Liquids	Gas
Europe						
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	Teeside (UK)	34.93		x	
Oseberg Transport System	Oseberg, Brage and Veslefrikk	Sture	12.98		x	
Sleipner East Condensate Pipe	Sleipner East	Karsto	10.00		x	
Troll Oil Pipeline I and II	Troll B and C	Vestprosess (Mongstad refinery)	3.71		x	
Vestprosess	Kollsnes (Area E)	Vestprosess (Mongstad refinery)	5.00		x	
Polared	Asta Hansteen/Linnorm	Nyhamna	5.11			x
The Netherlands						
Nogat pipeline	F3-FB	Den Helder	5.00			x
WGT K13-Den Helder	K13A	Den Helder	4.66			x
WGT K13-Extension	Markham	K13 (via K4/K5)	23.00			x
United Kingdom						
Alwyn Liquid Export Line	Alwyn North	Cormorant	100.00	x	x	
Bruce Liquid Export Line	Bruce	Forties (Unity)	43.25		x	
Central Graben Liquid Export Line (LEP)	Elgin-Franklin	ETAP	15.89		x	
Frigg System: UK line	Alwyn North, Bruce and others	St.Fergus (Scotland)	100.00	x		x
Ninian Pipeline System	Ninian	Sullom Voe	16.00		x	
Shearwater Elgin Area Line (SEAL)	Elgin-Franklin, Shearwater	Bacton	25.73			x
SEAL to Interconnector Link (SILK)	Bacton	Interconnector	54.66	x		x
Africa						
Gabon						
Mandji Pipes	Mandji fields	Cap Lopez Terminal	100.00 (a)	x	x	
Rabi Pipes	Rabi fields	Cap Lopez Terminal	100.00 (a)	x	x	
Americas						
Argentina						
Gas Andes	Neuquén Basin (Argentina)	Santiago (Chile)	56.50	x		x
TGN	Network (Northern Argentina)		15.40			x
TGM	TGN	Uruguyana (Brazil)	32.68			x
Bolivia						
Transierra	Yacuiba (Bolivia)	Rio Grande (Bolivia)	11.00			x
Brazil						
TBG	Bolivia-Brazil border	Porto Alegre via São Paulo	9.67			x
Asia						
Yadana	Yadana (Myanmar)	Ban-I Tong (Thai border)	31.24	x		x
Rest of world						
BTC	Baku (Azerbaijan)	Ceyhan (Turkey, Mediterranean)	5.00		x	
SCP	Baku (Azerbaijan)	Georgia/Turkey Border	10.00			x
Dolphin (International transport and network)	Ras Laffan (Qatar)	U.A.E.	24.50			x

(a) Interest of Total Gabon. The Group has a financial interest of 58.28% in Total Gabon.

2.2. Gas & Power

Gas & Power's primary objective is to contribute to the growth of the Group by ensuring sales outlets for its current and future natural gas reserves and production.

In order to optimize these gas resources, particularly liquefied natural gas (LNG), Gas & Power's activities include the trading and marketing of natural gas, liquefied natural gas, liquefied petroleum gas (LPG) and electricity as well as shipping. Gas & Power also has stakes in infrastructure companies (re-gasification terminals, natural gas transport and storage, power plants) necessary to implement its strategy.

In addtion, Gas & Power manages a coal business line, handling everything from production to marketing.

2.2.1. Liquefied Natural Gas

A pioneer in the LNG industry, TOTAL today is one of the world's leading players[1] in the sector and has sound and diversified positions both in the upstream and downstream portions of the LNG chain. LNG development is key to the Group's strategy, with TOTAL strengthening its positions in most major production zones and markets.

Through its stakes in liquefaction plants[2] located in Qatar, the United Arab Emirates, Oman, Nigeria, Norway, Yemen and Angola and its gas supply agreement with the Bontang LNG plant in Indonesia, TOTAL markets LNG in all worldwide markets. The share of LNG production sold by TOTAL in 2013 reached 12.3 Mt, an increase of over 7% compared to 2012 LNG sales (11.4 Mt). This increase was due in particular to the improved performance of the Yemen LNG plant in 2013. The Group's forthcoming liquefaction projects, in particular in Australia and Russia, are aimed at increasing TOTAL's share of LNG sold over the coming years.

Gas & Power is responsible for LNG operations downstream from liquefaction plants. It is in charge of marketing LNG on behalf of Exploration & Production and developing the Group's LNG downstream portfolio for its trading, marketing and transport operations as well as re-gasification terminals.

2.2.1.1. Long-term Group LNG purchases

TOTAL acquires long-term LNG volumes most frequently from liquefaction plants in which the Group holds a stake. These volumes support expansion of the Group's worldwide LNG portfolio.

In **Nigeria,** as part of the Nigeria LNG project in which the Group has a 15% interest, TOTAL signed an LNG purchase agreement, initially intended for deliveries to the United States and Europe, for 0.23 Mt/y over a 23-year period starting in 2006, to which an additional 0.94 Mt/y was added when the sixth train came on stream in 2007.

TOTAL also holds a 17% stake in the Brass LNG project involving the ongoing study of a gas liquefaction plant with plans to construct two LNG trains, each with a capacity of 5 Mt/y. In 2006, TOTAL signed a preliminary agreement with Brass LNG Ltd setting forth the principal terms of an LNG purchase agreement for approximately one-sixth of the plant's capacity over a 20-year period. This purchase agreement is subject to the final investment decision for the project.

In **Norway,** as part of the Snøhvit project, in which the Group holds an 18.4% stake, TOTAL signed in 2004 a purchase agreement for 0.78 Mt/y of LNG over a 15-year period primarily intended for North America and Europe. LNG deliveries started in 2007.

In **Qatar,** TOTAL signed purchase agreements in 2006 for 5.2 Mt/y of LNG from train 5 (16.7%) of Qatargas 2 over a 25-year period. This LNG is marketed mainly in France, the United Kingdom and North America. LNG deliveries started in 2009.

In **Yemen,** TOTAL signed an agreement with Yemen LNG Ltd (39.62%) in 2005 to purchase 2 Mt/y of LNG over a 20-year period, initially intended for delivery to the United States and Europe. LNG deliveries started in 2009.

Since 2009, part of the volume purchased by the Group pursuant to its long-term contracts related to the LNG projects mentioned above has been diverted to markets in Asia.

The new LNG sources described below are expected to support growth of the Group's LNG portfolio.

In **Australia,** TOTAL increased its stake in the Ichthys LNG project in early 2013 from 24% to 30%. Launched in early 2012, this project calls for the construction of two LNG trains, each with a capacity of 4.2 Mt/y. In addition, TOTAL signed in 2011 an LNG purchase agreement amounting to 0.9 Mt/y over a 15-year period. Deliveries are expected to start in 2017.

In **Russia,** TOTAL owns a 20% stake in Yamal LNG, which is overseeing a project to develop the South Tambey gas and condensates field and build a gas liquefaction plant with three trains supporting an LNG production of 16.5 Mt/y. The final investment decision was made in December 2013. Concurrently, TOTAL signed LNG purchase agreements amounting to 4 Mt/y over a 24-year period.

In the **United States,** TOTAL entered into an agreement in 2012 with the South Korean national natural gas company Kogas for the purchase of 0.7 Mt/y of LNG over a 20-year period from train 3 of the Sabine Pass gas terminal (Louisiana). Deliveries are expected to start in 2017. In parallel to this, TOTAL also entered into an agreement with Sabine Pass Liquefaction LLC for the purchase of 2 Mt/y of LNG over a 20-year period from train 5 of the Sabine Pass terminal. LNG deliveries will begin on the date on which train 5 is commissioned, which is scheduled for 2018. This agreement is conditional on, among other things, export and construction permits being obtained by Sabine Pass Liquefaction LLC (which owns and operates the terminal) for the construction of train 5 and the final investment decision for the project.

(1) Company data, based on upstream and downstream LNG portfolios in 2013.
(2) Exploration & Production is in charge of the Group's natural gas liquefaction and production operations.

2.2.1.2. Long-term Group LNG sales

TOTAL has signed agreements for the sale of LNG from the Group's global LNG portfolio:

In **China,** TOTAL signed an LNG sales agreement with China National Offshore Oil Company (CNOOC). Under this agreement, which became effective in 2010, TOTAL supplies up to 1 Mt/y of LNG to CNOOC over a 15-year period.

In **South Korea,** TOTAL signed an LNG sales agreement in 2011 with Kogas. Under this agreement, TOTAL will deliver up to 2 Mt/y of LNG to Kogas between 2014 and 2031.

2.2.1.3. LNG shipping

With regard to LNG transport operations, TOTAL has been the direct long-term charterer since 2004 of the Arctic Lady, a 145,000 m³ LNG vessel that ships TOTAL's share of production from the Snøhvit liquefaction plant in Norway. In 2011, TOTAL signed a second long-term contract for the chartering of a 165,000 m³ LNG vessel, the Meridian Spirit (former Maersk Meridian), in order to strengthen its transport capacities with regard to its lifting commitments in Norway.

The Group is also beginning to develop a fleet. TOTAL signed a long-term charter agreement in April 2013 in this regard with SK Shipping and Marubeni for two 182,000 m³ vessels. The vessels will serve in fulfilling the purchase agreements of Total Gas & Power, including commitments relating to the Ichthys LNG project in Australia and the Sabine Pass project in the United States. These tankers, scheduled for delivery in 2017, will be among the largest to navigate the Panama Canal following its anticipated enlargement in 2015.

As of December 31, 2013, the Group held a 30% stake in Gaztransport & Technigaz (GTT), which focuses mainly on the design and engineering of membrane cryogenic tanks for LNG tankers. At year-end 2013, out of a worldwide tonnage estimated at 369 LNG vessels[(1)], 262 active LNG vessels were equipped with membrane tanks built under GTT licenses. TOTAL sold a share of its stake in GTT through the initial public offering (IPO) of GTT's shares on Euronext Paris at the end of February 2014. Excluding the over-allotment option, TOTAL's residual stake in GTT is 11.5%.

2.2.2. Trading

TOTAL continued in 2013 to pursue its strategy of developing operations downstream from natural gas and LNG production. The aim of this strategy is to optimize access for the Group's current and future production to traditional markets (with long-term contracts) and to markets open to international competition (with short-term contracts and spot sales). In the context of deregulated markets, which allow customers to more freely access suppliers, in turn leading to marketing arrangements that are more flexible than traditional long-term contracts, TOTAL is developing trading, marketing and logistics businesses to offer its natural gas and LNG production directly to customers.

In parallel, the Group has operations in electricity trading and LPG as well as coal marketing. Furthermore, TOTAL began to market the petcoke production of the Port Arthur refinery (United States) in 2011.

Gas & Power's trading teams are located in London, Houston, Geneva and Singapore and conduct most of their business through the Group's wholly-owned subsidiaries Total Gas & Power, Total Gas & Power North America and Total Gas & Power Asia.

2.2.2.1. Gas and electricity

TOTAL has gas and electricity trading operations in Europe and North America with a view to selling the Group's production and supplying its gas marketing subsidiaries in addition to supporting other Group activities.

In **Europe,** TOTAL marketed 1,194 Bcf (33.8 Bm³) of natural gas in 2013, including approximately 13.8% coming from the Group's production, compared to 1,488 Bcf (42.1 Bm³) in 2012 and 1,500 Bcf (42.5 Bm³) in 2011. In addition, TOTAL marketed, mainly from external resources, 53.0 TWh of electricity in 2013 compared to 53.3 TWh in 2012 and 24.2 TWh in 2011.

In **North America,** TOTAL marketed from its own production or external resources 938 Bcf (26.6 Bm³) of natural gas in 2013, compared to 1,256 Bcf (36 Bm³) in 2012 and 1,694 Bcf (48 Bm³) in 2011.

2.2.2.2. LNG

TOTAL has LNG trading operations through spot sales and fixed-term contracts as described in section 2.2.1. Since 2009, new purchase agreements from the Qatargas 2 and Yemen LNG projects and new sale agreements in China, India, Japan and South Korea have substantially developed the Group's LNG marketing operations, particularly in Asia's most buoyant markets. This spot and fixed-term LNG portfolio allows TOTAL to supply gas to its main customers worldwide, while retaining a sufficient degree of flexibility to react to market opportunities.

In 2013, TOTAL purchased 89 contractual cargoes from Qatar, Yemen, Nigeria and Norway and 9 spot cargoes from France, Trinidad & Tobago and Nigeria, compared to respectively 87 and 8 in 2012 and 99 and 10 in 2011.

2.2.2.3. LPG

TOTAL traded and sold approximately 5.6 Mt of LPG (butane and propane) worldwide in 2013, compared to 6 Mt in 2012 and 5.7 Mt in 2011. Approximately 23% of these quantities came from fields or refineries operated by the Group. LPG trading involved the use of 11 time-charters, representing 233 voyages in 2013, and approximately 65 spot charters.

2.2.2.4. Coal

TOTAL marketed 8.5 Mt of coal in the international market in 2013 and 2012 compared to 7.5 Mt in 2011. More than 80% of this coal came from South Africa. Approximately 60% of the volume was sold in Asia, where coal is used primarily to generate electricity. The remaining volume was marketed in Europe.

(1) Gaztransport & Technigaz data.

2.2.2.5. Petcoke

TOTAL began to market the petcoke produced by the coker at the Port Arthur refinery in 2011. Approximately 1.2 Mt of petcoke was sold on the international market in 2013, compared to 1.1 Mt in 2012 and 0.6 Mt in 2011, to cement plants and electricity producers mainly in Mexico, Brazil, Turkey, China, Dominican Republic and other Latin American countries.

2.2.3. Marketing

To unlock value from the Group's production, TOTAL is developing gas, electricity and coal marketing operations with end users in the United Kingdom, France, Spain and Germany. At the end of 2012, the Group enlarged its European marketing coverage by creating two marketing affiliates: Total Gas & Power Belgium (formerly known as Total Gas & Power North Europe) in Belgium, and Total Gas & Power Nederland B.V. in the Netherlands. These two subsidiaries started their operations in 2013.

In the **United Kingdom,** TOTAL markets gas and electricity to the industrial and commercial segments through its subsidiary Total Gas & Power Ltd. In 2013, volumes of gas sold amounted to 142 Bcf (4.0 Bm^3), compared to 146 Bcf (4.2 Bm^3) in 2012 and 162 Bcf (4.6 Bm^3) in 2011. Sales of electricity totaled approximately 4.7 TWh in 2013, compared to 3.9 TWh in 2012 and 4.1 TWh in 2011.

In **France,** TOTAL markets natural gas through its subsidiary Total Energie Gaz (TEGAZ), the overall sales of which were 141 Bcf (4.0 Bm^3) in 2013, compared to 176 Bcf (5 Bm^3) in 2012 and 208 Bcf (5.9 Bm^3) in 2011. The Group also markets coal to its French customers through its subsidiary CDF Energie, with sales of approximately 0.81 Mt in 2013, compared to 0.97 Mt in 2012 and 1.2 Mt in 2011.

In **Spain,** TOTAL markets natural gas to the industrial and commercial segments through Cepsa Gas Comercializadora, in which it holds a 35% stake. Volumes of gas sold amounted to 101 Bcf (2.9 Bm^3) in 2013 and 2012 compared to 85 Bcf (2.4 Bm^3) in 2011.

In **Germany,** Total Energie Gas GmbH, marketing subsidiary of TOTAL created in 2010, marketed 76 Bcf (2.2 Bm^3) of gas in 2013 to industrial and commercial customers, compared to 5 Bcf (0.15 Bm^3) in 2012.

The Group also holds stakes in the marketing companies that are associated with the Altamira and Hazira LNG re-gasification terminals located in Mexico and India, respectively.

2.2.4. Gas facilities

TOTAL develops natural gas transport networks, gas storage facilities (both liquid and gaseous) and LNG re-gasification terminals downstream from its natural gas and LNG production.

2.2.4.1. Natural gas transport, natural gas and LPG storage

In **France,** TOTAL, through its 29.5% stake in Géométhane, owns natural gas storage in a salt cavern in Manosque with a capacity of 10.5 Bcf (0.3 Bm^3). A 7 Bcf (0.2 Bm^3) increase in storage capacity is scheduled to be commissioned in 2018.

TOTAL completed in July 2013 the sale of its subsidiary TIGF (Transport Infrastructures Gaz France) to the consortium consisting of Snam, EDF and GIC. TIGF has gas transport activities in southwestern France and operates a transport network of 5,000 km of gas pipeline.

In **South America,** TOTAL owns interests in several natural gas transport companies in Argentina, Chile and Brazil. These assets represent a total integrated network of approximately 9,500 km of pipelines serving the Argentinean, Chilean and Brazilian markets from gas-producing basins in Bolivia and Argentina, where the Group has natural gas reserves. These natural gas transport companies face a difficult operational and financial environment in Argentina stemming from the absence of an increase in transport tariffs and restrictions imposed on gas exports. However, GasAndes, a company in which TOTAL holds a 56.5% stake, successfully negotiated new contracts with all its customers.

In **India,** TOTAL holds a 50% stake in South Asian LPG Limited (SALPG), a company that operates an underground import and storage LPG terminal located on the east coast of the country. This cavern, the first of its kind in India, has a storage capacity of 60 kt. In 2013, inbound vessels transported 940 kt of LPG, compared to 950 kt in 2012 and 850 kt in 2011.

2.2.4.2. LNG re-gasification

TOTAL has entered into agreements to obtain long-term access to LNG re-gasification capacity on the three continents that are the largest consumers of natural gas: North America (United States and Mexico), Europe (France and the United Kingdom), and Asia (India). This diversified presence allows the Group to access new liquefaction projects by becoming a long-term buyer of a portion of the LNG produced at these plants, thereby strengthening its LNG supply portfolio.

In **France,** TOTAL holds a 27.54% stake in the company Fosmax and has, through its subsidiary Total Gas & Power Ltd., a re-gasification capacity of 79 Bcf/y (2.25 Bm^3/y). The terminal received fifty-three vessels in 2013, compared to fifty-six in 2012 and fifty-nine in 2011.

In 2011, TOTAL acquired a 9.99% stake in Dunkerque LNG in order to develop a methane terminal project with a capacity of 459 Bcf/y (13 Bm^3/y). Trade agreements have also been signed that allow TOTAL to reserve up to 2 Bm^3/y of re-gasification capacity over a 20-year period. The project is underway and commissioning of the terminal is scheduled for the end of 2015.

In the **United Kingdom,** through its equity interest in the Qatargas 2 project, TOTAL holds an 8.35% stake in the South Hook LNG re-gasification terminal with a total capacity of 742 Bcf/y (21 Bm^3/y) and an equivalent right of use to the terminal. In 2013, the terminal re-gasified fifty-two cargoes, compared to sixty-eight in 2012 and nearly one hundred in 2011.

In **Mexico,** TOTAL sold in 2011 its entire stake in the Altamira re-gasification terminal, but it retained a 25% reservation of the terminal's capacity (59 Bcf/y or 1.7 Bm^3/y) through its 25% stake in Gas del Litoral.

In the **United States,** TOTAL has reserved a re-gasification capacity of approximately 353 Bcf/y (10 Bm^3/y) at the Sabine Pass terminal (Louisiana) for a 20-year period ending in 2029. In 2012, the Sabine Pass terminal received the authorization to export LNG from four liquefaction trains, which involves converting the re-gasification plants into liquefaction plants. As a result, TOTAL negotiated financial compensation with Cheniere, the terminal's operator, in relation to the commissioning of the successive liquefaction trains.

In **India,** TOTAL holds a 26% stake in the Hazira terminal, where the natural gas re-gasification capacity was increased in 2013 to 244 Bcf/y (6.9 Bm^3/y). The terminal, located on the west coast of India in the Gujarat state, is a merchant terminal with operations that cover both LNG re-gasification and gas marketing.
Due to the Indian market's strong prospects for growth, a potential expansion project is under study to increase the terminal's capacity to 343 Bcf/y (9.7 Bm^3/y) by 2018.

2.2.5. Electricity generation

In a context of increasing global demand for electricity, TOTAL has developed expertise in the power generation sector, especially through cogeneration and combined-cycle power plant projects.

In **Abu Dhabi,** the Taweelah A1 power plant, which is owned by Gulf Total Tractebel Power Cy (20%), combines electricity generation and water desalination. The plant, in operation since 2003, currently has a net power generation capacity of 1,600 MW and a water desalination capacity of 385,000 m^3 per day. The plant's production is sold to Abu Dhabi Water and Electricity Company (ADWEC) as part of a long-term agreement.

In **Nigeria,** TOTAL and its partner, the state-owned Nigerian National Petroleum Corporation (NNPC), own interests in two gas-fired power plant projects that are part of the government's objectives to develop power generation and increase the share of natural gas production for domestic use:

- the Afam VI power plant, part of the Shell Petroleum Development Company (SPDC) joint venture in which TOTAL holds a 10% stake, is a 630 MW combined-cycle power plant that has been in operation since the end of 2010; and
- the potential development of a new 417 MW combined-cycle power plant near the city of Obite (Niger Delta) in connection with the OML 58 gas project (40%, operator).

In **Thailand,** TOTAL owns 28% of Eastern Power and Electric Company Ltd, which operates the combined-cycle gas power plant in Bang Bo that has a capacity of 350 MW and has been in operation since 2003. The plant's production is sold to the Electricity Generating Authority of Thailand under a long-term agreement.

2.2.6. Coal production

For nearly thirty years, TOTAL, through its subsidiary Total Coal South Africa (TCSA), has produced and exported coal from South Africa primarily to Europe and Asia. In 2013, TCSA produced 4.3 Mt of coal.

TCSA owns and operates five mines in South Africa and continues to study other projects aimed at developing its mining resources.

The South African coal produced by TCSA or bought from third-parties' mines is either marketed locally or exported through the port of Richard's Bay, in which TCSA holds a 4.8% interest.

3. Refining & Chemicals segment

The Refining & Chemicals segment constitutes a large industrial group that encompasses refining, petrochemicals, and specialty chemicals operations. This segment created on January 1, 2012 [1], following the reorganization of the Downstream and Chemical segments, also includes Trading & Shipping activities.

Among the world's ten largest integrated producers [2]

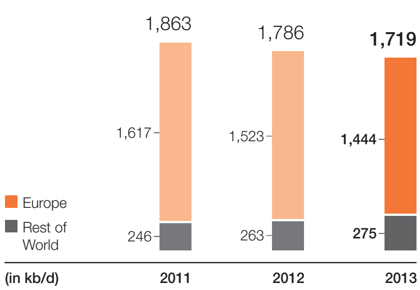
Refining capacity of approximately 2 Mb/d at year-end 2013

One of the leading traders of oil and refined products worldwide

€2 billion invested in 2013

51,406 employees

Refinery throughput



In 2013, refinery throughput decreased by 4% compared to 2012, reflecting essentially a turnaround at the Antwerp refinery, higher maintenance at the Donges refinery, voluntary shutdowns in response to weak refining margins in late 2013, and the closure of the Rome refinery at the end of the third quarter 2012.

Refining & Chemicals segment financial data

(M€)	2013	2012	2011
Non-Group sales	86,204	91,117	77,146
Adjusted operating income [a]	1,329	1,455	609
Adjusted net operating income [a]	1,404	1,376	842
including Specialty Chemicals	*440*	*383*	*424*

(a) Adjusted results are defined as income using replacement cost, adjusted for special items, excluding the impact of changes for fair value from January 1, 2011.

For 2013, the ERMI was 17.9 $/t, a decrease of 50% compared to 2012. Petrochemical margins remained at high levels, particularly in the United States.

For the full-year 2013, adjusted net operating income from the Refining & Chemicals segment was 1,404 M€, compared to 1,376 M€ in 2012 and 842 M€ in 2011. Expressed in dollars, adjusted net operating income was 1.9 B$, an increase of 5% compared to 2012, despite the 50% decrease in refining margins. The increase was due in part to the tangible results realized from the implementation of planned synergies and operational efficiencies and to a more favorable environment for petrochemicals that offset the sharp decline in European refining margins.

In addition, the SATORP integrated refinery in Saudi Arabia has begun to export refined products after the successful start-up of its first units.

The ROACE [3] for the Refining & Chemicals segment was 9% for the full-year 2013, stable compared to the full-year 2012.

(1) As a result of the reorganization, certain information has been restated.
(2) Based on publicly available information, 2012 consolidated sales.
(3) Calculated based on adjusted net operating income and average capital employed, using replacement cost.

3.1. Refining & Chemicals

Refining & Chemicals includes the Group's refining, petrochemicals and specialty chemicals businesses. The petrochemicals business includes base petrochemicals (olefins and aromatics) and polymer derivatives (polyethylene, polypropylene and polystyrene). The specialty chemicals business includes elastomer processing, adhesives and electroplating chemistry. The volume of its Refining & Chemicals activities places TOTAL among the top ten integrated chemical producers in the world[(1)].

Against the backdrop of rising worldwide demand for oil and petrochemicals driven by non-OECD countries, the strategy of Refining & Chemicals, in addition to the priority given to safety and environmental protection, involves:

- adapting production capacity to changes in demand in Europe by concentrating investments on integrated platforms;
- consolidating industrial means of production and the search for opportunities for growth in the United States; and
- strengthening TOTAL's positions in Asia and the Middle East, in particular to gain access to advantaged oil and gas resources and to benefit from growth in the markets.

This strategy is underpinned by an effort to differentiate through the technology used and innovation found in its products and processes, and involves pursuing asset portfolio management to focus on core businesses.

Since 2012, Refining & Chemicals has launched a comprehensive program to improve operational efficiency and to generate synergies between its refining and petrochemicals activities. In particular, four industrial priorities were set for the Refining & Chemicals activities: safety, availability of facilities, cost controls and energy efficiency. These action plans, combined with the development projects on its major integrated platforms and the growth of specialty chemicals, should improve the profitability of operations by making the most of Refining & Petrochemicals' assets.

In June 2013, TOTAL completed the divestment of its Fertilizers activity (Base Chemicals) in Europe, mainly through the sale of its shares in GPN S.A. (100%), France's leading producer of nitrogen fertilizers, and in the Belgian company Rosier S.A. (56.86%)[(2)].

3.1.1. Refining & Petrochemicals

TOTAL's refining capacity was 2,042 kb/d as of December 31, 2013, compared to 2,048 kb/d at year-end 2012 and 2,096 kb/d at year-end 2011. The Group's worldwide refined products sales (including trading operations) in 2013 were 3,418 kb/d, compared to 3,403 kb/d in 2012 and 3,639 kb/d in 2011.

TOTAL has equity stakes in twenty-one refineries (including nine that it operates), located in Europe, the United States, the French West Indies, Africa, the Middle East and China.

Refining & Chemicals sector manages the refining operations located in Europe (excluding the joint venture TotalErg in Italy), the United States, the Middle East and Asia, with a capacity of 1,953 kb/d at year-end 2013 (*i.e.*, 96% of the Group's total capacity[(3)]).

The petrochemicals businesses are located mainly in Europe, the United States, Qatar, South Korea and Saudi Arabia. Most of these sites are either adjacent or connected by pipelines to Group refineries. As a result, TOTAL's petrochemical operations are integrated within its refining operations.

The year 2013 saw the startup of the first production at the SATORP refinery in Saudi Arabia. Through this project, approved in 2009, the Group holds a stake, alongside Saudi Aramco, in one of the most competitive refining & petrochemicals platforms in the world.

TOTAL also announced in 2013 a major investment program to modernize the platform in Antwerp, Belgium, and a project to adapt the petrochemicals platform in Carling, France, with the goal of restoring competitiveness by 2016.

In 2011, TOTAL closed the sale to IPIC of its 48.83% stake in CEPSA as part of a public takeover bid on the entire share capital of CEPSA. With respect to refining operations, this sale concerned mainly four Spanish refineries (Huelva, Algeciras, Tenerife, Tarragona) and, with respect to petrochemicals operations, aromatics and their derivatives.

3.1.1.1. Europe

TOTAL is the largest refiner in Western Europe[(4)].

In **Western Europe**, TOTAL's refining capacity was 1,736 kb/d at year-end 2013, compared to 1,742 kb/d at year-end 2012 and 1,787 kb/d at year-end 2011, accounting for 85% of the Group's overall refining capacity. The decrease in 2012 was due primarily to the shutdown of the Rome refinery. The Group operates eight refineries in Western Europe (one in Antwerp, Belgium, five in France in Donges, Feyzin, Gonfreville, Grandpuits and La Mède, one in Immingham in the United Kingdom and one in Leuna, Germany) and owns stakes in the Schwedt refinery in Germany, the Zeeland refinery in the Netherlands and the Trecate refinery in Italy through its interest in TotalErg.

The Group's main petrochemical sites are located in Belgium, in Antwerp (steam crackers, aromatics, polyethylene) and Feluy (polyolefins, polystyrene), and in France, in Carling (steam cracker, aromatics, polyethylene, polystyrene), Feyzin (steam cracker, aromatics), Gonfreville (steam crackers, aromatics, styrene, polyolefins, polystyrene) and Lavéra (steam cracker, aromatics, polypropylene). Europe accounts for 54% of the Group's petrochemicals capacity, *i.e.*, 10,899 kt at year-end 2013 compared to 11,803 kt at year-end 2012 and 11,013 kt at year-end 2011. The decrease in 2013 was due essentially to the closure of one steam cracker in Antwerp. The increase in 2012 was due mainly to the acquisition of 35% of Fina Antwerp Olefins.

- In **France**, the Group owns five refineries and continues to adapt its refining capacities by shifting the production emphasis to diesel and improving operational efficiency against the backdrop of a structural decline in the demand for petroleum products in Europe and an increase in gasoline surpluses.

  The Group has been implementing its industrial plan intended to reconfigure the Gonfreville refinery in Normandy, France, since 2009.

(1) Based on publicly available information, production capacities at year-end 2012.
(2) The divestment did not include TOTAL's interest in Grande Paroisse S.A., through which TOTAL has retained all liabilities related to the former activities of Grande Paroisse, and in particular those related to the AZF site in Toulouse.
(3) Earnings related to the refining assets in Africa, the French West Indies and the TotalErg joint venture are reported in the results of the Marketing & Services segment.
(4) Based on publicly available information, 2012 refining capacities and quantities sold.

The project is intended to upgrade the refinery and shift the production emphasis to diesel. For this purpose, the investments resulted in reducing the annual distillation capacity to 12 Mt from 16 Mt, upsizing the hydrocracker unit for heavy diesel cuts and improving energy efficiency by lowering carbon dioxide emissions. Most of the new configuration was rolled out at the beginning of 2013 after a major complete shutdown of the refinery. The complete project is expected to be finalized by mid-2014 with the startup of a new diesel desulfurization unit.

In parallel, the project to modernize the Normandy platform's petrochemical operations was completed in early 2012. This project improved the energy efficiency of the steam cracker and the high-density polyethylene unit.

In petrochemicals, the Group announced in September 2013 an investment plan for the Carling platform in Lorraine, France, to adapt its capacity and restore its competitiveness. The project provides for the development of new hydrocarbon resin and polymer production activities and the shutdown of the steam cracking activity in the second half of 2015.

– In **Belgium**, the Group announced in May 2013 the launch of a major project to modernize its Antwerp platform. This project consists of two parts:
  - the construction of new conversion units in response to the shift in demand towards lighter oil products with a very low sulfur content; and
  - the construction of a new unit to convert the gases recovered from the refining process into raw materials for petrochemical units.

The modernization plan also provides for the shutdown of two of the site's oldest production units: one steam cracker in 2013, and a polyethylene production line by the end of 2014.

TOTAL built a new unit in Feluy that is starting up in 2014 in order to produce latest-generation expansible polystyrene for the fast-growing insulation market.

Moreover, in 2012, TOTAL acquired 35% of Fina Antwerp Olefins, Europe's second largest base petrochemicals (monomers) production plant[1].

– In the **United Kingdom**, the commissioning in 2011 of the hydrodesulfurization (HDS) unit at the Lindsey refinery allowed the refinery to increase its crude processing flexibility (up to 70% of high-sulfur crudes, compared to 10% previously) and its low-sulfur diesel production.

  In 2013, TOTAL decided to shut down its 70 kt/year polystyrene production site at Stalybridge, while continuing its commercial activity for polymers in the United Kingdom.

– In **Italy**, TotalErg (49%) holds a 24.45% stake in the Trecate refinery. The Rome refinery, which was wholly-owned by TotalErg, was turned into a depot in 2012.

3.1.1.2. North America

The Group's main sites are located in Texas, in Port Arthur (refinery, steam cracker), Bayport (polyethylene) and La Porte (polypropylene), and in Louisiana, in Carville (styrene, polystyrene).

In 2011, TOTAL completed a program to upgrade the Port Arthur refinery that included the construction of a desulfurization unit, a vacuum distillation unit, a deep-conversion unit (or coker) and other associated units. This modernization allows the refinery to process more heavy and high-sulfur crudes and to increase production of lighter products, in particular low-sulfur distillates.

TOTAL and BASF purchased in 2011 Shell's stakes in Sabina, a butane processing plant, which they transferred to BTP (40%), their joint subsidiary that owns the Port Arthur steam cracker. This new structure increases synergies between the refinery and the steam cracker, which are located on the same site in Port Arthur.

Furthermore, as a result of the investment made to adapt its furnaces, the BTP cracker has, since April 2013, been able to produce almost 40% of its ethylene from ethane and 40% from butane and propane, which allows it to benefit from favorable market conditions in the United States. The ongoing construction of a new ethane-burning furnace will increase the steam cracker's production capacity by almost 15% in 2014.

3.1.1.3. Asia and the Middle East

TOTAL is continuing to expand in growth areas and is developing sites in countries with favorable access to raw materials.

In **Saudi Arabia**, the joint venture Saudi Aramco Total Refining and Petrochemical Company (SATORP) was created in 2008 by TOTAL (37.5%) and Saudi Aramco (Saudi Arabian Oil Company, 62.5%) in order to build a 400 kb/d refinery in Jubail. Saudi Aramco plans to retain a 37.5% interest, with the remaining 25% expected to be listed on the Saudi stock exchange. Most of the different units of SATORP were gradually commissioned in 2013 and the commercial exports of petroleum products started in September 2013. All the refining and petrochemicals units should be operational by the end of first quarter 2014. Production is expected to reach full capacity around mid-2014.

The configuration of this refinery is designed for processing heavy crudes produced in Saudi Arabia and selling fuels and other light products that meet strict specifications and that are mainly intended for export. The refinery is also integrated with the petrochemical units: a 700 kt/y paraxylene unit, a 200 kt/y propylene unit, and a 140 kt/y benzene unit.

In **China**, TOTAL holds a 22.4% stake in WEPEC, a company that operates a refinery located in Dalian and that also produces polypropylene.

The Group is also active through its polystyrene plant in Foshan (Guangzhou region), the capacity of which doubled to 200 kt/y at the beginning of 2011. A new polystyrene compounds unit started up on this site in the first quarter of 2013. TOTAL began the construction of a new 200 kt/y polystyrene plant in Ningbo in the Shanghai region, with production scheduled to start up in the second half of 2014.

(1) Based on publicly available information, production capacities at year-end 2012.

In **South Korea**, TOTAL holds a 50% stake in Samsung Total Petrochemicals Co., Ltd., which operates the petrochemical site located in Daesan (condensate splitter, steam cracker, styrene, paraxylene, polyolefins). The joint venture completed in mid-2011 the first debottlenecking phase of the units at the Daesan site in order to bring them to full capacity. This first phase included increasing the capacity of the steam cracker to 1,000 kt/y and the polyolefin units to 1,150 kt/y. A second phase took place in September 2012 and involved increasing the capacity of the paraxylene unit to 700 kt/y.

In addition, to keep up with growth in the Asian markets, two major projects are under construction for planned start-up in 2014: a new 240 kt/y EVA(1) unit and a new aromatic unit with a capacity of 1.5 Mt/y of paraxylene and benzene, the raw material of which will be supplied by a new condensate splitter that will also produce kerosene (1.5 Mt/y) and diesel (1.0 Mt/y). As a result, the site's paraxylene production capacity will be increased to 1.8 Mt/y. Together, these projects are expected to double the production capacity of the site between 2011 and 2015.

In **Qatar**, the Group holds interests(2) in two ethane-based steam crackers (Qapco, RLOC) and four polyethylene lines (Qapco, Qatofin), including the linear low-density polyethylene plant with a capacity of 450 kt/y operated by Qatofin in Messaied and a new 300 kt/y low-density polyethylene line operated by Qapco, which started up in 2012.

TOTAL holds a 10% stake in the Ras Laffan condensate refinery, which has a capacity of 146 kb/d. Plans to double the refinery's capacity were approved in April 2013 and are expected to be completed in 2016. The project also includes the construction of a new diesel hydrogenation unit scheduled to come on-stream in 2014.

3.1.1.4. Crude oil refining capacity

The table below sets forth TOTAL's daily crude oil refining capacity(3):

As of December 31, (kb/d)	2013	2012	2011
Nine refineries operated by Group companies			
Normandy (100%)	247	247	247
Provence (100%)	153	153	153
Donges (100%)	219	219	219
Feyzin (100%)	109	109	109
Grandpuits (100%)	101	101	101
Antwerp (100%)	338	338	338
Leuna (100%)	227	227	227
Lindsey-Immingham (100%)	207	207	207
Port-Arthur (100%)	169	169	169
Subtotal	**1,770**	**1,770**	**1,770**
Other refineries in which the Group has equity stakes(a)	272	278	326
Total	2,042	2,048	2,096

(a) TOTAL's share in the eleven refineries in which TOTAL has equity stakes ranging from 10% to 55% (one in the Netherlands, in Germany, in China, in Qatar, in Italy and in Martinique and five in Africa). Rome refinery shutdown in 2012. The SATORP platform at Jubail in Saudi Arabia (TOTAL, 37.5%), that was in the process of starting up on December 31, 2013, was not taken into account in the above table of capacities. In 2014, once entirely operational, TOTAL's share of capacity in the refinery will be 145 kb/d.

3.1.1.5. Refined products

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

(kb/d)	2013	2012	2011
Gasoline	340	351	350
Aviation fuel(b)	146	153	158
Diesel and heating oils	739	734	804
Heavy fuels	133	160	179
Other products	322	338	335
Total	1,680	1,736	1,826

(a) For refineries not 100% owned by TOTAL, the production shown is TOTAL's equity share of the site's overall production.
(b) Avgas, jet fuel and kerosene.

(1) Ethylene and vinyl acetate copolymers.
(2) TOTAL interests: Qapco (20%); Qatofin (49%); Ras Laffan Olefin Cracker (22.5%).
(3) Capacity data based on refinery process unit stream-day capacities under normal operating conditions, less the impact of shutdown for regular repair and maintenance activities averaged over an extended period of time.

3.1.1.6. Utilization rate

The tables below set forth the utilization rate of the Group's refineries:

On crude and other feedstock[(a)(b)]	2013	2012	2011
France	78%	82%	91%
Rest of Europe[(c)]	87%	88%	78%
Americas	100%	99%	81%
Asia and Middle East	75%	67%	67%
Africa	78%	75%	80%
Average	**84%**	**86%**	**83%**

(a) Including equity share of refineries in which the Group has a stake.
(b) Crude + crackers' feedstock/distillation capacity at the beginning of the year.
(c) Including CEPSA (for first seven months of 2011) and TotalErg.

On crude[(a)(b)]	2013	2012	2011
Average	80%	82%	78%

(a) Including equity share of refineries in which the Group has a stake.
(b) Crude/distillation capacity at the beginning of the year.

NB: Ras Laffan refinery contribution (Middle East) included in above utilization rates from 2013.

3.1.1.7. Petrochemicals: breakdown of TOTAL's main production capacities

As of December 31, (in thousands of tons)	2013				2012	2011
	Europe	North America	Asia and Middle East[(a)]	Worldwide	Worldwide	Worldwide
Olefins[(b)]	4,939	1,295	1,420	7,654	8,039	7,097
Aromatics[(c)]	2,893	1,512	1,230	5,635	5,795	5,730
Polyethylene	1,200	445	644	2,289	2,239	2,094
Polypropylene	1,345	1,200	350	2,895	2,875	2,835
Polystyrene	522	700	308	1,530	1,595	1,555
Other[(d)]	-	-	63	63	358	358
Total	**10,899**	**5,152**	**4,014**	**20,065**	**20,900**	**19,668**

(a) Including interests in Qatar and 50% of Samsung Total Petrochemicals Co., Ltd. capacities. The SATORP platform at Jubail in Saudi Arabia (TOTAL, 37.5%), that was in the process of starting up on December 31, 2013, was not taken into account in the above table of capacities. In 2014, once entirely operational, TOTAL's share of capacity in the plant will be 390 kt (75 kt of olefins and 315 kt of aromatics).
(b) Ethylene, propylene and butadiene.
(c) Including Monomer Styrene.
(d) Mainly Monoethylene Glycol (MEG) and Cyclohexane.

3.1.1.8. Development of new avenues for the production of fuels and polymers

In addition to optimizing existing processes, TOTAL is exploring new ways for valorizing carbon resources, conventional or otherwise (natural gas, coal, biomass, waste). A number of innovative projects are being examined that entail defining access to the resource (nature, location, supply method, transport), the nature of the molecules and target markets (fuels, lubricants, petrochemicals, specialty chemicals), and the most appropriate, efficient and environmentally-friendly conversion processes.

3.1.1.8.1. Natural gas to liquids

TOTAL continues to develop its know-how in the conversion of natural gas to fuel. For large-scale projects (more than 10 kboe/d), TOTAL is consolidating its know-how in the most efficient conversion processes and is contributing to the development of innovative solutions, in particular by developing new Fischer-Tropsch catalysts. TOTAL is also conducting research into small-scale concepts, such as torched gas solutions.

3.1.1.8.2. Coal to polymers

TOTAL has developed know-how in the various processes used to convert coal into higher value products by gasification. These efforts allow a better understanding of the technological issues specific to each process, such as Fischer-Tropsch, methanol, di-methyl ether (DME) and methane, particularly in terms of energy optimization, water consumption and carbon capture.

TOTAL is studying a coal to olefin (CTO) conversion project in partnership with the China Power Investment utility company that would be located in Inner Mongolia (China). This 800 kt/y olefins project would use the innovative Methanol-to-Olefins process (MTO/OCP), which has been successfully tested in 2013 on a demonstration unit at Feluy, Belgium. Following the approval from the Chinese authorities in November 2013, a detailed study has been launched.

In parallel, TOTAL is pursuing a program to develop new carbon capture and storage technologies in order to reduce the environmental footprint of the Group's industrial projects based on fossil energy. In partnership with the IFP Énergies Nouvelles (French Institute for

Oil and Alternative Energies), TOTAL is involved in an R&D program related to chemical looping combustion, an innovative process to burn solid and gas feedstock that includes carbon capture at a very low energy cost. In 2010, this partnership resulted in the construction of a pilot at the Solaize site in France.

3.1.1.8.3. Biomass to polymers

TOTAL is involved in the development of processes dedicated or related to the conversion of biomass to polymers. The main area of focus is the development of a polylactic acid (PLA) production technology through Futerro, a joint venture with Galactic, a lactic acid producer, as well as developing a technology for dehydration of bio-alcohols into olefins (monomers for the manufacture of large conventional polymers), in collaboration with IFPen/Axens.

3.1.1.8.4. Biomass to fuels

TOTAL is a member of the BioTFuel consortium, the objective of which is to develop a chain for converting lignocellulose into fungible, sulfur-free liquid products through gasification and synthesis using the Fischer-Tropsch process. To benefit from economies of scale, it is envisaged to convert lignocellulosic feedstock into a blend with fossil resources. This development involves an initial pilot demonstration phase.

In 2013, the Group incorporated:

- In gasoline, 549 kt of ethanol [1] at its European refineries and several oil depots [2], compared to 531 kt in 2012 and 494 kt in 2011 [3] ; and
- In diesel, 1,951 kt of VOME [4] at its European refineries and several oil depots [5], compared to 1,927 kt in 2012 and 1,859 kt in 2011 [3].

3.1.2. Specialty Chemicals

The specialty chemicals businesses include elastomer processing (Hutchinson), adhesives (Bostik) and electroplating chemistry (Atotech). They serve the automotive, construction, electronics, aerospace and convenience goods markets, for which marketing, innovation and customer service are key drivers. TOTAL markets specialty products in more than sixty countries and intends to develop by combining organic growth and targeted acquisitions. This development is focused on high-growth markets and the marketing of innovative products with high added value that meet the Group's Sustainable Development approach.

In 2013, consolidated worldwide sales of specialty chemicals activities (excluding Resins) totaled €5.7 billion, stable compared to 2012 and up 7% compared to 2011.

The Cray Valley coating resins and Sartomer photocure resins businesses were divested in 2011. However, the structural and hydrocarbon resins business lines were kept and have been incorporated into the Polymer division.

3.1.3.1. Elastomer processing

Hutchinson manufactures and markets products derived from elastomer processing that are principally intended for the automotive, aerospace and defense industries.

Among the industry's leaders worldwide [6], Hutchinson provides its customers with innovative solutions in the areas of fluid transfer, air and fluid seals, anti-vibration, sound and thermal insulation, and transmission and mobility.

Hutchinson has eighty-four production sites worldwide, including fifty-six in Europe, seventeen in North America, six in Asia, four in South America and one in Africa.

Hutchinson's sales in 2013 were €3.28 billion, up 3% compared to 2012. Despite the difficulties experienced by the European automotive sector, sales for the automotive business increased by 5% due to the growth of the Asian and North American markets and increased market share in Europe. On the industrial markets, sales increased by 1%, mainly due to the increased sales on the civil aerospace that offset contraction of the defense markets.

To strengthen its position in the aerospace industry, Hutchinson acquired Kaefer in 2011, a German company specializing in aircraft interior equipment (*e.g.*, insulation, ventilation ducts) and the Canadian company Marquez specializing in air-conditioning circuits at the end of 2012. In the automotive sector, Hutchinson acquired Keum-Ah in 2011, a South Korean company specializing in fluid transfer systems. Hutchinson closed the Oyartzun production plant in Spain at the end of 2012.

In July 2013, Hutchinson divested 30% of its automobile brake hose business in Spain (Palamos) through the creation of a joint venture with Japanese company Nichirin, one of the world leaders in this segment. Elsewhere, in July 2013, Hutchinson acquired Gasket International, a company based in Italy and China, which specializes in the production of sealing parts for valves for the oil and gas industry.

Hutchinson continues to develop in strong growth potential markets and among the most dynamic and strongest customers. Hutchinson continuously strives to innovate, offering its customers high-performance materials and high-value added solutions capable of performing the most demanding functions.

3.1.3.2. Adhesives

Bostik is one of the world leaders in the adhesive sector and has significant positions on the industrial, hygiene and construction markets, complemented by both consumer and professional distribution channels.

Bostik has forty-six production sites worldwide, including eighteen in Europe, nine in North America, eight in Asia, six in Australia-New Zealand, three in South America and two in Africa.

(1) Including ethanol from ETBE (Ethyl-tertio-butyl-ether) and biomethanol from bio-MTBE (Methyl-tertio-butyl-ether), expressed in ethanol equivalent. Reference for bio content of ETBE and bio-MTBE is the RED directive.
(2) PCK and Zeeland Refinery included (TOTAL share).
(3) PCK and Zeeland Refinery included (TOTAL share). TotalErg (100% JV) included.
(4) VOME: Vegetable-Oil-Methyl-Ester. Including HVO (Hydrotreated Vegetable Oil).
(5) Including TotalErg's Rome and Trecate refinery/depots and TotalErg depots in Italy (100% TotalErg). PCK and Zeeland Refinery included (TOTAL share).
(6) Based on publicly available information, 2013 consolidated sales.

Sales were €1.51 billion in 2013, a decrease of 3% compared to 2012.

Bostik continues to strengthen its technological positions in the construction and industrial sectors, pursue its program for differentiation focused mainly on an offering of innovative bonding solutions, continue its expansion in high-growth countries and improve its operational performance.

Consequently, following the start-up of a new production unit in Egypt and the opening of a new technology center for Asia in Shanghai in 2012, Bostik inaugurated in 2013 a new production unit in Changshu, China, which will ultimately become Bostik's largest production plant in the world.

Bostik continued to rationalize its industrial base in 2013 with the shutdown of production in Dublin, Ireland, Barcelona, Spain, Lisbon, Portugal and Zhuhai, China. A workshop was also shut down in Leicester, United Kingdom.

Finally, in 2013, Bostik launched its new visual identity, designed to transform Bostik into a more visible worldwide brand that will gradually replace some forty local brands.

3.1.3.3. Electroplating

Atotech is the leading company in the electroplating sector based on worldwide sales [1]. It is active in the markets for electronics (printed circuits, semiconductors) and general surface treatments (automotive, construction, furnishing).

Atotech has seventeen production sites worldwide, including seven in Asia, six in Europe, three in North America and one in South America.

Sales totaled €0.89 billion in 2013, a decrease of 8% compared to 2012, mainly due to the slump in the sales of electroplating equipment and the divestment of a commodities reselling activities (anodes).

In 2013, Atotech successfully continued to pursue its strategy designed to differentiate its products through a comprehensive service provided to its customers in terms of equipment, processes, design and chemical products and through the development of green, innovative technologies to reduce the environmental footprint. This strategy relies on global coverage provided by its technical centers located near customers.

In order to strengthen its position in the electronics market, Atotech started up a new production unit in 2011 aimed at the semiconductors market in Neuruppin (Germany) and acquired adhesive technologies (molecular interfaces) in the nanotechnology sector in the United States. In addition, a new equipment production site is expected to be opened in China in the third quarter of 2014.

Atotech intends to continue to develop in Asia, which already represents approximately 65% of its global sales.

3.2. Trading & Shipping

Trading & Shipping's main focus is serving the Group, and its activities primarily involve:

- selling and marketing the Group's crude oil production;
- providing a supply of crude oil for the Group's refineries;
- importing and exporting the appropriate petroleum and refined products for the Group's refineries to be able to adjust their production to the needs of local markets;
- chartering appropriate ships for these activities; and
- undertaking trading on various derivatives markets.

Trading & Shipping conducts its activities worldwide through various wholly-owned subsidiaries, including TOTSA Total Oil Trading S.A., Atlantic Trading & Marketing Inc., Total Trading Asia Pte, Total Trading and Marketing Canada L.P., Total Trading Atlantique S.A. and Chartering & Shipping Services S.A.

3.2.1. Trading

TOTAL is one of the world's largest traders of crude oil and refined products on the basis of volumes traded. The table below sets forth selected information with respect to Trading's worldwide crude oil sales and supply sources and refined products sales for each of the past three years.

Trading of physical volumes of crude oil and refined products amounted to 4.5 Mb/d in 2013.

(1) Based on publicly available information, 2013 consolidated sales.

Trading's crude oil sales and supply and refined products sales [(a)]

(kb/d)	2013	2012	2011
Group's worldwide liquids production	**1,167**	**1,220**	**1,226**
Purchased by Trading from Exploration & Production	916	976	960
Purchased by Trading from external suppliers	1,994	1,904	1,833
Total of Trading's supply	**2,910**	**2,880**	**2,793**
Sales by Trading to Refining & Chemicals and Marketing & Services segments	1,556	1,569	1,524
Sales by Trading to external customers	1,354	1,311	1,269
Total of Trading's sales	**2,910**	**2,880**	**2,793**
Total of Trading's refined products sales	1,628	1,608	1,632

(a) Including condensates.

Trading operates extensively on physical and derivatives markets, both organized and over the counter. In connection with its trading activities, TOTAL, like most other oil companies, uses derivative energy instruments (futures, forwards, swaps and options) to adjust its exposure to fluctuations in the price of crude oil and refined products. These transactions are entered into with various counterparties.

For additional information concerning derivatives transactions by Trading & Shipping, see Notes 30 (Financial instruments related to commodity contracts) and 31 (Market risks) to the Consolidated Financial Statements (Chapter 10, point 7).

All of TOTAL's trading activities are subject to strict internal controls and trading limits.

In 2013, the global oil market was balanced and oil prices fell slightly from 2012. Crude oil prices were subject to increased backwardation [(1)]. Crude oil prices in North America benefited from a significant reduction in the price spread between the crude markers WTI (West Texas Intermediate, confined to the central United States and subject to a local production surplus) and Dated Brent (delivered in the North Sea and accessible to the international crude market). Freight rates decreased in 2013 due to an ever-growing availability in charter capacities.

		2013	2012	2011	2013/12	min 2013		max 2013	
Brent ICE - 1st Line [(a)]	($/b)	108.70	111.68	110.91	-2.7%	97.69	(Apr 17)	118.90	(Feb 8)
Brent ICE - 12th Line [(b)]	($/b)	103.04	106.66	108.12	-3.4%	95.95	(Apr 17)	110.50	(Feb 13)
Backwardation time structure (1st - 12th)	($/b)	5.67	5.01	2.79	13.1%	11.37	(Sep 3)	1.74	(Apr 17)
WTI NYMEX - 1st Line [(a)]	($/b)	98.05	94.15	95.11	4.1%	86.68	(Feb 13)	110.53	(May 4)
WTI vs. Brent 1st Line	($/b)	-10.66	-17.53	-15.80	-39.2%	-23.18	(Feb 8)	-0.02	(Jul 19)
Gasoil ICE - 1st Line [(a)]	($/t)	918.98	953.42	933.30	-3.6%	822.75	(May 1)	1,030.75	(Feb 18)
ICE Gasoil vs ICE Brent	($/b)	14.65	16.30	14.36	-10.1%	9.20	(May 2)	19.62	(Feb 11)

(a) 1st Line: quotation on ICE or NYMEX Futures for first nearby month delivery.
(b) 12th Line: quotation on ICE Futures for twelfth nearby month delivery.

In 2013, Trading's activities were affected by the global economic environment described below. After a slow-down worldwide during the first quarter of 2013, economic growth began a gradual recovery, pulling the Eurozone out of six quarters of recession by the second quarter of 2013. This slight improvement came to a halt in the third quarter under the impact of significant exchange rate fluctuations in emerging markets and the budget debate in the United States.

In this context, growth in the demand for oil nevertheless remained constant (+1.1 Mb/d [(2)], nearly identical to 2012). Diesel fuel and gasoline led this growth (+0.4 Mb/d each), while demand for fuel oil contracted (-0.2 Mb/d) due to efficiency gains among shipowners and reduced demand from Japanese power generators. The increase in oil demand was focused in Asia and the Middle East (+0.6 Mb/d in total), while demand in Europe decreased (-0.2 Mb/d).

Estimated global oil supplies stagnated in 2013, increasing by only +0.2 Mb/d after jumping +2.7 Mb/d in 2012. Non-OPEC production grew by approximately +1.0 Mb/d, increasing by +1.2 Mb/d in North America (United States and Canada), which offset declining or stagnating output in other countries.

Overall OPEC production decreased by 1.0 Mb/d, with crude oil production decreasing by 1.1 Mb/d. Significant crude oil production capacity was made unavailable (more than 3 Mb/d in the third quarter, compared to approximately 2 Mb/d at the start of 2013), thereby limiting the supply from certain countries due to, among other reasons, sanctions imposed on Iran, conflicts in Libya and acts of sabotage in Nigeria and Iraq. Saudi Arabia increased its production during the course of 2013 to help maintain market equilibrium, which sharply reduced OPEC's excess capacity.

(1) "Backwardation" is a term used to describe an energy market in which the value of the spot, or prompt, price is higher than the value of the forward or futures contracts trading concurrently. The reverse situation is described as "contango".
(2) TOTAL estimates.

The differential between supply and demand narrowed in 2013, dropping from +1.2 Mb/d in 2012 to +0.3 Mb/d due to the increase in demand and flat supply, thereby slowing the anticipated increase in global oil stocks.

Crude oil prices started 2013 on an upward trend, with Dated Brent hitting a high of $119.03/b on February 8. Prices then steadily fell, driven downward by the deteriorating economic environment in Europe and an oversupplied crude market, to reach a low of $96.83/b on April 17. The price of Dated Brent stabilized during the second quarter of 2013 at a level between $100/b and $105/b. Market tensions in the third quarter drove the price of Dated Brent back upward ($117.12/b on September 6), before prices subsequently leveled off below $110/b.

On the futures market, the backwardation of ICE Brent contract prices increased as a result of the same supply tensions that lifted spot (Dated Brent) prices in the first quarter of 2013. This backwardation decreased considerably during the second quarter with the seasonal drop in demand for crude oil, mainly due to planned refinery shutdowns for maintenance. The post-maintenance resumption of refining activity and new supply tensions drove backwardation to a maximum of $11/b toward the end of August before it decreased again late in the year.

The year 2013 was also marked by the narrowing of the crude price spread between WTI and Dated Brent. Extension of the Seaway pipeline from Cushing, Oklahoma, to the Texas coast of the Gulf of Mexico between January and April, along with the commissioning of additional pipelines from the Permian Basin in western Texas to the Gulf of Mexico in the second quarter, helped to restore balance in the central U.S. market. The crude price spread between WTI and Dated Brent consequently fell from around $20/b in January/February 2013 to around $4/b in July/August. This price spread widened once again beginning in the third quarter with the continuing rapid increase in domestic U.S. crude production and only moderate increases in demand.

While global refining capacity grew by approximately +0.9 Mb/d in 2013, crude throughputs increased by only approximately +0.4 Mb/d, held back by weaker refining margins. The weak margins reflect the growing surplus in global refining capacity. Asian refiners dominated the increases in refinery throughputs and capacity (+0.6 Mb/d and +1.0 Mb/d, respectively).

3.2.2. Shipping

The transportation of crude oil and refined products necessary for the activities of the Group is arranged by Shipping. These requirements are fulfilled through balanced use of the spot and time-charter markets. A rigorous safety policy is applied by Shipping mainly through a strict selection of chartered vessels. Like a certain number of other oil companies and shipowners, the Group uses freight rate derivative contracts to adjust its exposure to freight rate fluctuations.

In 2013, Trading & Shipping chartered more than 3,000 voyages to transport approximately 115 Mt of crude oil and refined products. As of December 31, 2013, Trading & Shipping employed a fleet of forty-six vessels, none of which were single-hulled, that were chartered under long-term or medium-term agreements (including seven LPG carriers). The fleet has an average age of approximately five years.

Freight rate averages of three representative routes for crude transportation

		2013	2012	2011	min 2013		max 2013	
VLCC Ras Tanura Chiba-BITR [a]	($/t)	11.83	12.82	11.99	8.95	(Jan 29)	18.99	(Nov 20)
Suezmax Bonny Philadelphia-BITR	($/t)	13.41	14.44	13.86	9.45	(Oct 2)	25.58	(Dec 18)
Aframax Sullom Voe Wilhemshaven-BITR	($/t)	7.02	6.48	6.51	6.04	(Feb 1)	14.16	(Dec 24)

(a) VLCC: Very Large Crude Carrier. BITR: Baltic International Tanker Routes.

The first nine months of 2013 were a difficult period for the oil shipping sector, particularly for larger crude tankers. Conditions were more favorable, meanwhile, for petroleum product carriers. At the same time, marine bunker prices remained high with a knock-on effect on transport costs.

Global demand for the transport of crude oil stabilized in 2013 after posting an increase of more than 5% among larger-sized vessels in 2012. This situation was attributable mainly to a decrease in North American imports due to an increase in local production in that region. This was partially offset by an increase in demand in Asia, particularly in China, which has been diversifying its supply from more distant sources (South America, Western Africa). The increase in tonnage continued to be strong, weakening the balance between supply and demand to historic levels. This led to record lows in VLCC freight rates through the end of the third quarter. The closing months of 2013 saw a reversal in crude oil freight rates, which reached a record annual level due to especially strong ongoing demand for deliveries to Asia from the Atlantic Basin.

The situation in the petroleum product shipping market was better overall than in the crude oil shipping market. Demand for the transport of petroleum products was particularly strong, with arbitrage in favor of longer routes, especially to Asia (notably the flow of naphtha from Europe to Asia on large carriers). Starting in early 2013, freight rates induced ship owners to resume ordering petroleum product tankers (MR and LR2 [(1)]), a sector in which growth had moderated.

(1) MR: Medium Range – 50,000 DWT (deadweight tonnage); LR2: Long Range – 110,000 DWT.

4. Marketing & Services segment

The Marketing & Services segment was created on January 1, 2012, following the reorganization of the Downstream and Chemicals segments, and includes worldwide supply and marketing activities in the oil products field, as well as, since July 1, 2012, the activity of New Energies[(1)].

Among the largest marketers in Western Europe[(2)]

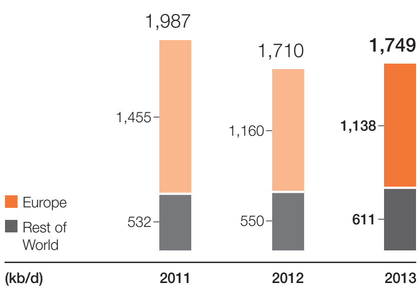
N°1 marketer in Africa[(2)]

14,820 service stations at year-end 2013 (excluding AS24 service stations)

€1.4 billion invested in 2013

27,878 employees

2013 refined products sales[(a)]



(a) Excludes trading and refining bulk sales, includes share of CEPSA through July 31, 2011, and of TotalErg.

For 2013, sales volumes increased by 2% compared to the previous year, due to growth in Africa and the Americas, partially offset by a decrease in Europe.

Marketing & Services segment financial data

(M€)	2013	2012	2011
Non-Group sales	83,481	86,614	85,325
Adjusted operating income[(a)]	1,596	1,355	1,199
Adjusted net operating income[(a)]	1,151	830	822
Including New Energies	*(2)*	*(169)*	*(197)*

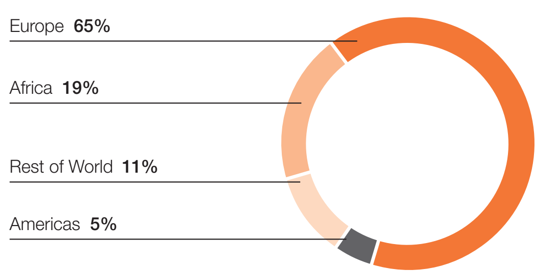
(a) Adjusted results are defined as income using replacement cost, adjusted for special items, excluding the impact of changes for fair value from January 1, 2011.

For 2013, Marketing & Services segment sales were €83.5 billion, a decrease of 4% compared to 2012.

Adjusted net operating income from the Marketing & Services segment in 2013 was €1,151 million compared to €830 million in 2012, an increase of 39% reflecting essentially the improvement in the performance of the New Energies, which had particularly negative results in 2012, as well as the overall improvement made in refined products marketing, particularly in emerging markets.

The ROACE[(3)] for the Marketing & Services segment was 16% for 2013, compared to 12% for 2012.

2013 refined products sales by geographical area: 1,749 kb/d[(a)]



(a) Excludes trading and refining bulk sales, includes share of TotalErg.

(1) As a result of the reorganization, certain information has been restated.
(2) Based on publicly available information based on quantities sold.
(3) Calculated based on adjusted net operating income and average capital employed, using replacement cost.

4.1. Marketing & Services

TOTAL is one of the leading marketers in Western Europe[(1)]. It is also the leader[(2)] in Africa and certain Middle Eastern countries.

TOTAL sells a wide range of products produced from its refineries and other facilities in approximately 150 countries[(3)]. TOTAL is among the key players in the specialty products market, in particular for lubricants, LPG, jet fuel, special fluids, bitumen, heavy fuels and marine fuels.

TOTAL also sells numerous services for consumers and professionals in the mobility, residential and industrial sectors.

As part of its activities, Marketing & Services holds stakes in five refineries in Africa, one in Europe through its share in TotalErg (49%) and one in the Caribbean.

Marketing & Services follows a proactive, primarily organic, development strategy involving the shifting of positions to high-growth areas.

4.1.1. Europe

TOTAL operates a network of more than 8,850 service stations in Europe located throughout France, Belgium, the Netherlands, Luxembourg and Germany as well as Italy through its stake in TotalErg (49%). The Group is a major player in the market for fuel-payment cards, with nearly 3.8 million cards issued in twenty-seven European countries.

In specialty products, the Group benefits from its extensive presence in Europe and relies on numerous industrial facilities to produce lubricants (mainly Rouen in France and Ertvelde in Belgium), special fluids (Oudalle in France), bitumen (Brunsbüttel in Germany) and grease (Baisieux in France).

In **Western Europe**, TOTAL continued to optimize its Marketing business in 2013.

– In **France**, the dense network includes more than 1,600 TOTAL-branded service stations, 600 Total Access stations (service station concept combining low prices and premium TOTAL-branded fuels and services) and 1,550 Elan service stations, which are located mainly in rural areas.

  In addition, TOTAL's GR (fuel and service cards) offering was expanded in 2013, helping to consolidate the Group's leading position in the provision of solutions to road transport professionals.

  TOTAL leads the heating oil market in France[(4)], with seven local subsidiaries covering the entire country. TOTAL continued its diversification strategy in 2013, with the commercial launch of wood pellets and online sale of fuel through fioulmarket.fr, France's first website for heating oil consumers.

  In petroleum products logistics, Marketing & Services finalized the implementation of a new organization at the end of 2012. As a result of this adaptation, TOTAL now holds stakes in twenty-three depots, of which it operates seven.

– In **Italy**, TotalErg (49%) has a network of more than 3,000 service stations, which makes it the third-largest operator in the country. As part of an asset optimization strategy, TotalErg ceased production at its Rome refinery in late 2012 and subsequently converted that site into a logistics hub for petroleum products storage.

– In the **United Kingdom**, TOTAL retains a market presence through its specialty products activities, particularly lubricants and jet fuel. In 2011, the Group sold its network of service stations and its fuel and heating oil marketing business in the United Kingdom, the Channel Islands and the Isle of Man.

In **Northern**, **Central and Eastern Europe**, TOTAL continued in 2013 to expand its direct presence in these growing markets, in particular for lubricants and bitumen. The Group specifically accelerated growth of its business in specialty products, including bitumen, in Russia and launched a marketing subsidiary in Kazakhstan.

TOTAL also operates a network of 731 AS24-branded service stations dedicated to commercial transporters in twenty-seven European countries. The Group continued developing its business in 2013 in Turkey, where it opened a new subsidiary. The AS24 network is expected to continue to grow, mainly through expansion in the Mediterranean Basin and Russia and through its toll payment card service, which covers more than seventeen countries.

4.1.2. Africa & the Middle East

TOTAL is the leading marketer of petroleum products on the African continent and in certain Middle Eastern countries, with a market share averaging 13%[(5)] in 2013. The Group operates more than 4,700 service stations in more than forty countries in these high-growth markets, including major networks in South Africa, Turkey, Nigeria, Kenya, Egypt and Morocco.

In **Egypt**, TOTAL signed agreements with Shell (May 2013) and Chevron (August 2013) with a view to developing its network of service stations and wholesale business. After the closing of these transactions, the Group will become the second-largest private operator in Africa's largest market, with a 14% network[(6)] market share.

As part of the optimization of its portfolio, the Group undertook processes to open up the share capital of selected subsidiaries to local investors to enhance its local presence.

In **Jordan**, TOTAL continued developing its service station network and wholesale business following its acquisition of a distribution license there in 2012.

TOTAL is pursuing its strategy for growth in the specialty products markets. The Group, which relies in particular on the lubricants blending plant in Dubai, started up new plants in Egypt in 2012 and in Saudi Arabia in October 2013.

Moreover, TOTAL has become a leading partner for mining customers by delivering supply chain and management solutions for fuels and lubricants.

(1) Publicly available information, based on quantities sold (2013).
(2) PFC Energy and Company data.
(3) Including via national distributors.
(4) CPDP 2013 and Company data.
(5) Market share in the countries where the Group operates, based on 2013 publicly available information, quantities sold.
(6) PFC Energy.

4.1.3. Asia-Pacific

At year-end 2013, TOTAL was present in more than twenty countries in the Asia-Pacific region, where the Group is strengthening its position in the distribution of fuels and specialty products. In the lubricants sector in particular, TOTAL continues to grow in the region, with a 6.3% increase in lubricant sales in 2013 compared with 2012.

TOTAL operates service stations in China, Pakistan, the Philippines, Cambodia and Indonesia and is a significant player in the Pacific Islands.

In **China**, the Group was operating approximately 200 service stations at year-end 2013 through two joint ventures with Sinochem and a wholly-owned subsidiary. In October 2013, the Group opened its third lubricants blending plant in China. Located in Tianjin, this state-of-the-art plant has a capacity of 200 kt/y.

In **Pakistan**, through its local partner PARCO, TOTAL announced in August 2013 its acquisition of Chevron's distribution network. Pending approval from the relevant authorities, this transaction encompasses the management of more than 500 service stations as well as Chevron's fuel business and storage sites.

In **India**, TOTAL continued to strengthen its positions in the lubricants and LPG sectors with the expansion of its LPG network to thirty-three stations in 2013. In 2012, TOTAL also inaugurated its first lubricants, bitumen, special fluids and additives technical center outside of Europe.

In **Vietnam**, TOTAL continued to strengthen its presence in the specialty products market. The Group became one of the leaders in the Vietnamese LPG market with the acquisition of Vinagas in 2012.

In **Singapore**, TOTAL announced in March 2013 the construction of a lubricants blending plant with a capacity of 310 kt/y to assist in meeting inland and marine lubricants demand in the Asia-Pacific region.

4.1.4. Americas

In **Latin America** and the **Caribbean**, TOTAL is active directly in about twenty countries and indirectly (via distributors) in about ten more countries in the markets of specialty products (lubricants and special fluids) and fuels (service station network, wholesale, aviation). The Group holds a significant position[1] in the Caribbean fuel distribution business.

In the **United States** and **Canada**, TOTAL mainly markets specialty products, particularly lubricants, jet fuels and special fluids. To strengthen its special fluids business, the Group took on a project to build a special fluids production plant near Houston, Texas, which is expected to be operational at the beginning of 2015.

TOTAL operates a significant number of industrial units throughout the Americas (production of lubricants, storage and conditioning of LPG) and owns a 50% stake in SARA (Société anonyme de la raffinerie des Antilles) in Martinique.

4.1.5. Sales of refined products

The table below sets forth TOTAL's sales of refined products by region:

(kb/d)	2013	2012	2011
France	575	566	574
Europe, excluding France[a]	564	594	881
Americas	86	53	56
Africa	326	307	304
Rest of the World	198	190	172
Total excluding Trading and refinery bulk sales	**1,749**	**1,710**	**1,987**
Trading	1,155	1,161	1,215
Refinery bulk sales	514	532	437
Total including Trading and refinery bulk sales	**3,418**	**3,403**	**3,639**

(a) Including the Group's share in CEPSA (up to end of July 2011).

For data on biofuels, refer to Chapter 2, paragraph 3.1.1.8.

4.1.6. Service stations

The table below sets forth the number of service stations of the Group (excluding AS24):

As of December 31,	2013	2012	2011
France[a]	3,813	3,911	4,046
Europe, excluding France	5,062	5,200	5,375
of which TotalErg	3,017	3,161	3,355
Africa	3,726	3,601	3,464
Rest of the World	2,219	2,013	1,934
Total	**14,820**	**14,725**	**14,819**

(a) TOTAL, Total Access, Elf and Elan-branded service stations.

4.1.7. Product and services developments

TOTAL continued in 2013 its technical and R&D partnerships in Formula 1 with Renault Sport F1, in the WRC with Citroën Racing and in endurance racing with Toyota. The purpose of these partnerships is to demonstrate TOTAL's technical excellence in the formulation of fuels and lubricants under extreme conditions and restrictions on fuel consumption. The TOTAL brand was associated with two Formula 1 world titles in 2013.

TOTAL continued its Clean Energy Partnership (CEP) in Germany, which is centered on hydrogen distribution. TOTAL currently has five demonstration stations for hydrogen distribution in Germany. A new hydrogen station is scheduled to open near the new airport in Berlin during the first half of 2014. TOTAL signed an agreement with Daimler in 2013 for the joint development of eight new stations under the CEP. Along with its partners in the "H2 Mobility" initiative, TOTAL also signed a preliminary agreement covering the

(1) Present in multiple Caribbean islands including Puerto Rico, Jamaica, Haiti, Martinique and Guadeloupe.

implementation of an action plan targeting construction of a network of hydrogen stations throughout Germany. It is anticipated that this network will have approximately 400 stations by 2023 (subject to deployment of more than 250,000 fuel-cell electric vehicles).

TOTAL has approximately twenty prototype electric vehicle fueling stations in the Netherlands, Belgium, Germany and France. The demonstration program of the distribution of electricity (fast charge) intended for electric vehicles continued at these stations in 2013.

TOTAL undertook within its European subsidiaries additional studies in 2013 into the potential of LNG as a fuel for heavy duty vehicles. The development of at least two pilot stations is scheduled for 2014.

In response to global market developments and looking ahead to future growth opportunities, TOTAL developed and tested five new energy optimization offerings among consumers and Corporate customers in 2013 based on multi-energy production (fuels, gas, photovoltaic, wood) and energy efficiency services (audit, monitoring, management).

4.2. New Energies

New Energies is developing renewable energies that will, in combination with hydrocarbons, help establish a more diversified energy mix while also generating lower CO_2 emissions. In meeting this objective, TOTAL is focusing on two main development axes: solar energy, which benefits from unlimited energetic resources, particularly in certain geographical zones where the Group has a significant presence, and the transformation of biomass through use of biotechnology, which aims to develop new biosourced product solutions for transport and chemicals. The Group keeps an active watch on other renewable energies not classified as priority areas for development at this time.

4.2.1. Solar energy

TOTAL is developing upstream operations through industrial production and downstream marketing activities in the photovoltaic sector based on crystalline silicon technology. The Group is also pursuing R&D in this field through several industrial and academic partnerships.

The economic context in this sector is currently stabilizing following two years of sharp price decreases that drove many players out of the market. Competitiveness in photovoltaic solar energy has improved and significant technical achievements have supported the emergence for the first time of markets that are profitable without subsidization.

4.2.1.1. SunPower

As of December 31, 2013, TOTAL held a 64.65% stake in SunPower, a U.S. company listed on NASDAQ (NASDAQ: SPWR) and based in San José, California. SunPower is an integrated player that designs, manufactures and supplies the highest-efficiency solar panels in the market. For additional information, see chapter 7, point 2., energy efficiency. SunPower is active throughout the solar chain, from photovoltaic cell production based on crystalline silicon to the design and construction of large turnkey power plants, as well as the commercialization of solar solutions for residential and commercial markets.

Upstream, SunPower manufactures all of its cells in Asia (Philippines, Malaysia) and has a total production capacity of 1,300 MW/y. The company is continuing to adjust its production capacity while maintaining its technological leadership through a significant R&D program. The cells are assembled into modules, or solar panels, in plants located in Asia, the United States, Mexico, Europe and South Africa. A 350 MW expansion in capacity was approved at the end of 2013 for start-up of production in 2015.

Downstream, SunPower markets its panels worldwide for applications ranging from residential roof tiles to large solar power plants.

In the United States, SunPower completed the construction in 2013 of the California Valley Solar Ranch, solar power plant (CVSR, 314 MWp), and started up the plant at the world's largest solar farm, Solar Star (709 MWp), sold to NRG Energy and MidAmerican, respectively, at the time of the investment decision.

TOTAL and SunPower also launched new solar power plant projects in Chile and South Africa in 2013. In Chile, SunPower is both supplying panels for and constructing the Salvador plant (70 MWp) in cooperation with TOTAL. The project, in which TOTAL is a 20% shareholder, is 70% financed by OPIC, the U.S. development finance institution. The electricity produced will be sold on the spot market and used to power the Chilean electricity grid.

In South Africa, subsequent to a tender offer, TOTAL and SunPower were selected by the South African government to build a free-standing 86 MWp solar power plant. TOTAL is a 27% shareholder in the project, while SunPower will supply the solar panels and construct the plant, which will sell the electricity produced under an energy purchase agreement.

In Asia, SunPower was selected in September 2013 to become the main supplier of panels (69 MWp) to the largest solar power plant in Japan, located in the Aomori Prefecture.

4.2.1.2. Other solar assets

The Shams 1 solar power plant (109 MW of parabolic concentrated solar power) in Abu Dhabi was commissioned in September 2013 with production being sold to the Abu Dhabi Water Electricity Company (ADWEC). TOTAL (20%) will take part in its operation for a 25-year period.

TOTAL owns a 50% interest in the French company Sunzil, which markets photovoltaic panels overseas.

Elsewhere, the Group is continuing initiatives to display solar application solutions as part of decentralized rural electrification projects in a number of countries, including in South Africa via Kwazulu Energy Services Company (KES), in which TOTAL holds a 35% stake.

Photovoltech, a Belgian company (50%) specialized in manufacturing multicrystalline photovoltaic cells, was put into liquidation in October 2013 after having ceased operations in late 2012.

4.2.1.3. New solar technologies

In order to strengthen its technological leadership in the crystalline silicon field, and in addition to its cooperation with SunPower in the R&D field, New Energies partners with leading laboratories and research institutes in France and abroad. The aim of these partnerships is to optimize the photovoltaic solar chain (silicon, wafers, cells, modules and systems) by cutting production costs and multiplying its applications, while increasing the efficiency of the components in terms of electric conversion.

In this regard, TOTAL is working with the IMEC (Interuniversity MicroElectronics Center – Belgium) and the *École Polytechnique*'s LPICM (Laboratory of physics of interfaces and thin layers), which specializes in plasma-deposition processes at low temperatures. Further to this partnership, TOTAL and, principally, the CNRS, the *École Polytechnique* and EDF signed in October 2013 a funding agreement with the National Research Agency (ANR) concerning the IPVF (Institut Photovoltaïque d'Île-de-France), which, with its team of nearly 200 researchers, aims to eventually become one of the main centers worldwide conducting research into latest-generation photovoltaic devices.

With respect to electricity storage, TOTAL is continuing its R&D program with renowned institutions such as the Massachusetts Institute of Technology (MIT) in the United States to develop a new battery technology, and is investing in start-ups including Ambri (11%), founded at MIT, as well as Lightsail and Enervault, also based in the United States.

4.2.2. Biotechnologies and the conversion of biomass

TOTAL is exploring a number of opportunities for developing biomass depending on its nature, accessibility and sustainability. The Group's objective is to sell high-performance molecules in targeted markets (fuel, lubricants, special polymers, chemicals, etc.). The focus of New Energies is on the biochemical conversion process for this biomass.

Amyris Inc., a U.S. company listed on NASDAQ (NASDAQ: AMRS), was identified for TOTAL's first significant equity investment in biotechnology. At year-end 2013, TOTAL held 17.9% of the company. A collaboration agreement with Amyris has been signed covering research (including the formation of a shared research team), development, production and marketing activities relating to biosourced molecules. Amyris owns a cutting-edge industrial synthetic biological platform designed to create and optimize micro-organisms that can convert sugars into molecules of interest through fermentation. Amyris also owns a research laboratory and pilot units in California and Brazil. In early 2013, Amyris started up an industrial production site for farnesene, which is used in the production of renewable diesel and kerosene, in Brotas, in the state of São Paulo, Brazil.

At the end of 2013, TOTAL and Amyris created Total Amyris Biosolutions, a 50/50 joint venture that holds the exclusive rights and intellectual property in relation to farnesene.

In addition, the Group continues to develop a global network of R&D partnerships in technology segments that are complementary to Amyris' platform (deconstruction of lignocellulose, synthetic biology, metabolism engineering), including with Joint BioEnergy Institute (JBEI, United States), Novogy (United States), Gevo Inc. (NASDAQ: GEVO, United States), the University of Wageningen (Netherlands) and the Toulouse White Biotechnology consortium (TWB) (France).

The Group is also studying the longer-term potential for developing a cost-effective phototrophic process for producing biomolecules through the bio-engineering of microalgae and associated processes. An exploratory research agreement was signed with the Grenoble CEA (Atomic and Alternative Energies Commission) in late 2013, and two development projects are underway with the AlgaePark consortium in the Netherlands.

4.2.3. Other renewable energies

In the field of wind power, TOTAL owns a 12 MW wind farm in Mardyck (near Dunkirk, France), which was commissioned in 2003.

In marine energy, TOTAL holds a 26.7% share in Scotrenewables Tidal Power, located in the Orkney Islands in Scotland. Tests on a 250 kW prototype have been successfully completed. A 2 MW commercial model is being developed.

5. Investments

5.1. Major investments over the 2011-2013 period [1]

(M€)	2013	2012	2011
Upstream	22,396	19,618	20,662
Refining & Chemicals	2,039	1,944	1,910
Marketing & Services	1,365	1,301	1,834
Corporate	122	80	135
Total	25,922	22,943	24,541

Organic capital expenditure, including net investment in equity affiliates and non-consolidated subsidiaries, amounted to $28.3 billion in 2013 (€21.3 billion [2]), compared with $23.8 billion in 2012 (€18.5 billion). This increase was due to a rise in investments related to a large number of Upstream projects under development.

In 2013, in the Upstream segment, capital expenditure was mainly intended for the development of new hydrocarbon production facilities and exploration operations.Development expenditure was devoted primarily to the following projects: GLNG and Ichthys in Australia, Surmont and Fort Hills in Canada, the Ekofisk and Eldfisk areas in Norway, the Laggan Tormore projects in the United Kingdom, Moho North in Congo, CLOV in Angola, Ofon II and Egina in Nigeria and Yamal in Russia.

In the Refining & Chemicals segment, capital expenditure was devoted to the maintenance of facilities and safety and to projects to increase the production of lighter products, add desulphurization capacities, adapt the refining base to new specifications and improve energy efficiency. 2013 was marked by the announcement of the upgrading project at the Antwerp refinery in Belgium and a project to adapt the petrochemicals platform in Carling, France, and by the start of production at the SATORP refinery in Saudi Arabia.

In the Marketing & Services segment, capital expenditure in 2013 was mainly dedicated to the network, logistics and specialty production and storage facilities.

While continuing to develop its major Exploration & Production projects in 2013, the Group also strengthened its prospects beyond 2017 by acquiring high-potential assets, particularly in Brazil, and by extending its acreage through licenses obtained in promising exploration areas. Thus, acquisitions were $4.5 billion (€3.4 billion), comprised essentially of the acquisition of a stake in the Libra field in Brazil, an additional 6% stake in the Ichthys project in Australia, an additional 1.6% stake in Novatek [3], the carry agreement in the Utica shale gas and condensates field in the United States and the bonus for exploration licenses in South Africa, Mozambique and Brazil.

Total investment (including acquisitions and changes in non-current loans) therefore increased from $27.8 billion (€21.7 billion) in 2012 to $32.8 billion (€24.7 billion) in 2013.

In 2013, asset sales totaled $4.7 billion (€3,6 billion) compared with $5.9 billion (€4,6 billion) in 2012, comprised essentially of the sale of TIGF [4], a 25% stake in the Tempa Rossa field in Italy, the interest in the Voyager upgrader project in Canada, fertilizer operations and all the Exploration & Production assets in Trinidad and Tobago.

Net investments were therefore $25.9 billion (€19.5 billion) in 2013, compared with $21.9 billion (€17.1 billion) in 2012, an increase of 18%. They include $2.2 billion (€1.6 billion) related to the sale of minority equity interests in Total E&P Congo and Block 14 in Angola, which are shown in the financing section of the cash flow statement.

5.2. Major investments anticipated

After reaching a high of $28,3 billion in 2013, the organic investment budget was reduced to $26 billion in 2014, more than 80% of which will be dedicated to Upstream. Investments in the Upstream Segment are expected to amount to $ 22 billion and should be mainly dedicated to major development projects, including GLNG and Ichthys in Australia, Surmont and Fort Hills in Canada, the Ekofisk and Eldfisk areas in Norway, the Laggan Tormore projects in the United Kingdom, Moho North in Congo, CLOV in Angola, Ofon II and Egina in Nigeria and Yamal in Russia. A significant portion of the segment's budget will also be allocated to maintenance and integrity work on assets already in production.

The Refining & Chemicals segment has an over $ 2 billion capital expenditure budget, that is expected to be dedicated to the refining, petrochemicals and specialty chemicals businesses. In particular, 2014 is expected to be marked by the start of upgrade work on the integrated platform in Antwerp, Belgium. A significant portion of the segment's budget will also be allocated to maintenance and safety, which are vital to this type of industrial activity.

The Marketing & Services segment has a nearly $ 2 billion capital expenditure budget that is expected to finance, in particular, the service station network, logistics, specialty production and storage

(1) Including acquisitions. Major acquisitions for fiscal years 2011-2013 are detailed in Note 3 to the Consolidated Financial Statements of this Registration Document.
(2) Based on average exchange rates for 2013 of $1.3281/€.
(3) The Group's interest in Novatek was 16.96% at December 31, 2013.
(4) Major disposals for fiscal years 2011-2013 are detailed in Note 3 to the Consolidated Financial Statements of this Registration Document.

facilities (lubricants, LPG, etc.) and the development of this segment's activities in New Energies. Most of the Marketing & Services budget will be allocated to growth areas (Africa, Middle East, Asia and Latin America).

After 2014, TOTAL expects investments to be in line with more moderate post-2017 growth based on increased production. Moreover, all the Group's segments are making efforts to control their investments and reduce their operating costs while continuing to make safety an absolute priority.

TOTAL self-finances most of its capital expenditure from cash flow from operations (see the consolidated statement of cash flow, Chapter 10, point 5.), which is essentially increased by accessing the bond market on a regular basis, when conditions on the financial markets are favorable (see Note 20 to the Consolidated Financial Statements, Chapter 10, point 7.). However, capital expenditure for joint ventures between TOTAL and external partners are generally funded through project financing.

In addition, the Group has confirmed the target of selling $15 to $20 billion in assets over the 2012-2014 period. With $13 billion in assets already sold [(1)] at the end of 2013, the proposed sales being negotiated and reviewed should enable TOTAL to reach, and possibly exceed, the target set in 2014.

As part of certain project financing arrangements, TOTAL S.A. has provided guarantees. These guarantees ("Guarantees given on borrowings") as well as other information on off-balance sheet commitments and contractual obligations for the Group appear in Note 23 to the Consolidated Financial Statements (Chapter 10, point 7.). The Group does not currently consider that these guarantees, or any other off-balance sheet arrangements of TOTAL S.A. nor any other members of the Group, currently have or are reasonably likely to have in the future a material effect on the Group's financial situation, revenues or expenses, liquidity, capital expenditure or capital resources.

In November 2012, TOTAL announced the sale of the Group's interest in the offshore OML 138 Block in Nigeria, which includes the Usan. field, and in February 2014 the signing of an agreement to sell its 15% interest in the offshore Block 15/06 in Angola to Sonangol E&P for $750 million. The approval by the authorities has not yet been received for the sale of its interest in OML 138. The closing of the sale of the interest in Block 15/06 is expected during the first half of 2014.

6. Organizational structure

6.1. Position of the Company within the Group

TOTAL S.A. is the Group's parent company. As of December 31, 2013, there were 898 consolidated subsidiaries, of which 809 were fully consolidated and 89 were accounted for under the equity method.

The decision of TOTAL S.A.'s major subsidiaries to declare dividends is made by their relevant Shareholders' Meetings and is subject to the provisions of applicable local laws and regulations. As of December 31, 2013, there is no restriction under such provisions that would materially restrict the distribution to TOTAL S.A. of the dividends declared by those subsidiaries.

As of December 31, 2013, the Group's businesses are organized as indicated on the chart in point 8. of this Chapter. The Group's businesses receive assistance from Corporate divisions (Finance, Legal, Ethics, Insurance, Strategy & Business Intelligence, Human Resources and Communications) that are grouped within the parent company, TOTAL S.A.

6.2. Company subsidiaries

A list of the major subsidiaries directly or indirectly held by the Company is given in Note 35 to the Consolidated Financial Statements (Scope of Consolidation) in Chapter 10, point 7. of this Registration Document.

(1) Including other transactions with minority interests.

7. Property, plant and equipment

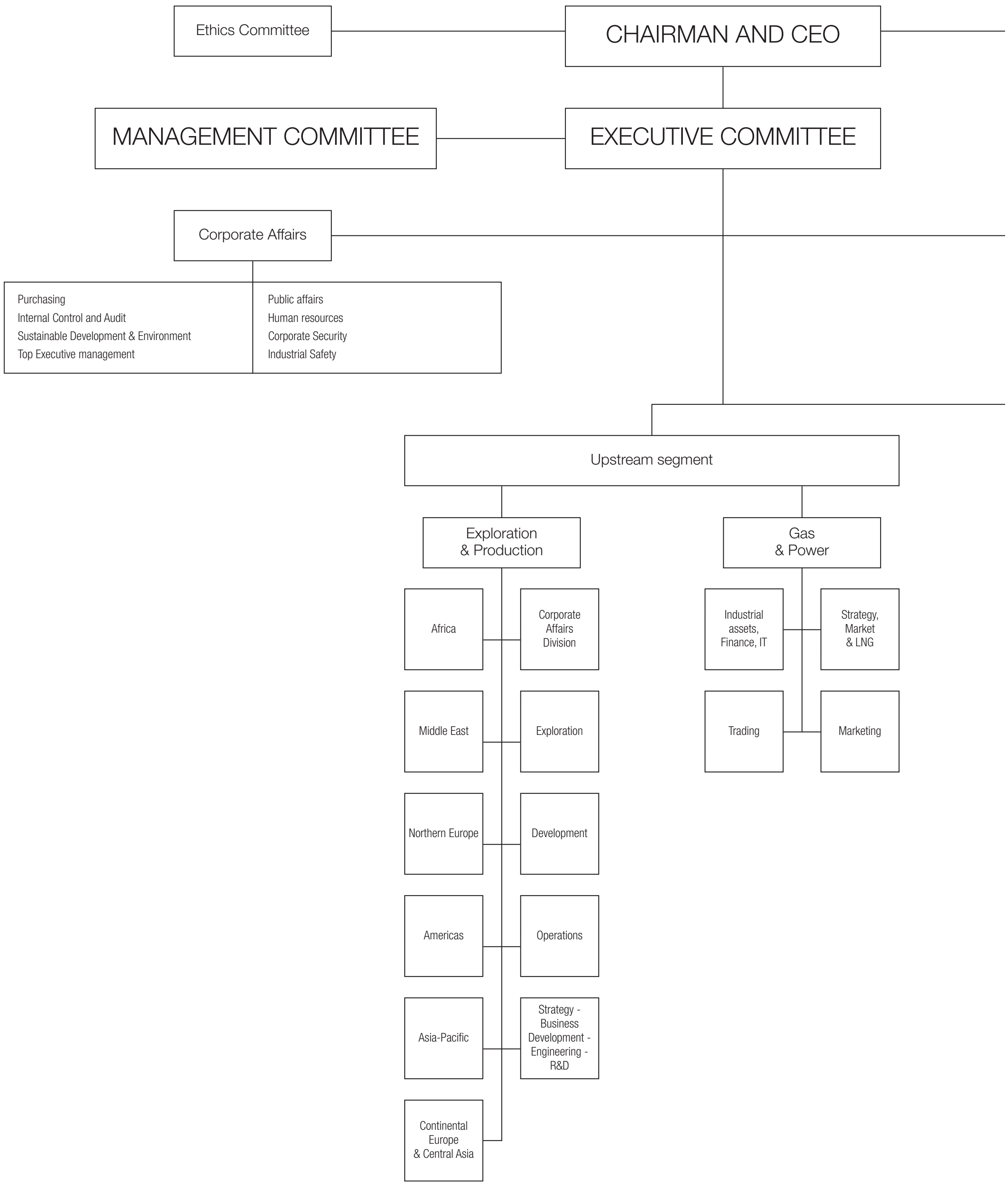
TOTAL has freehold and leasehold interests in over 130 countries throughout the world. Operations in properties, oil and gas fields or any other industrial, commercial or administrative facility, as well as the production capacities and utilization rates of these facilities, are described in this Chapter for each business segment (Upstream, Refining & Chemicals, Marketing & Services).

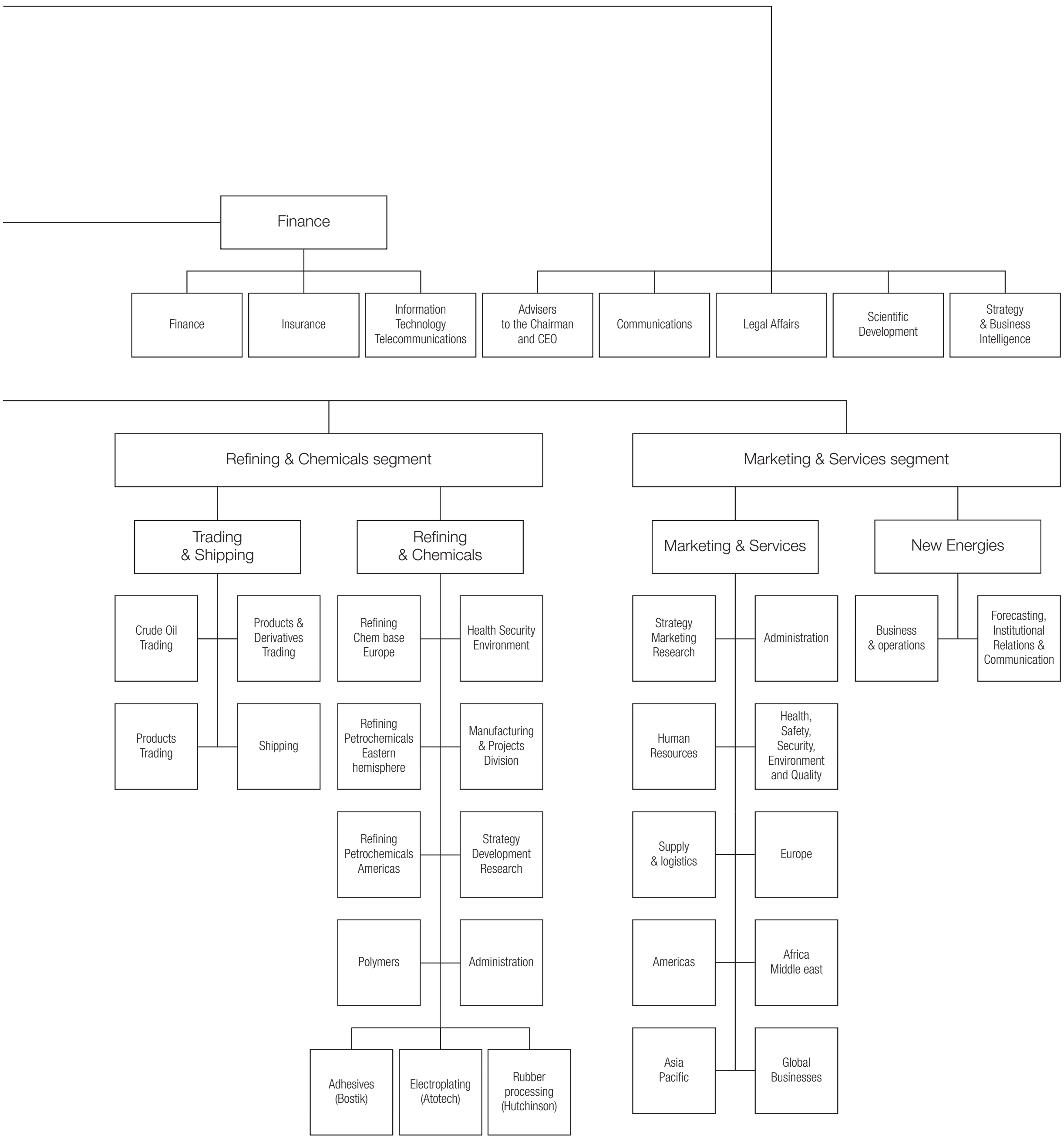
A summary of the Group's property, plant and equipment and their main related expenses (depreciation and impairment) is included in Note 11 to the Consolidated Financial Statements (Chapter 10, point 7.).

Minimum royalties from finance lease agreements regarding properties, service stations, vessels and other equipment are given in Note 22 to the Consolidated Financial Statements (Chapter 10, point 7.).

Information about the Company's environmental policy, in particular that related to the Group's industrial sites or facilities, is presented in Chapter 7 – Social and environmental information of this Registration Document.

8. Organization chart as of December 31, 2013




Finance
Finance
Insurance
Information Technology Telecommunications
Advisers to the Chairman and CEO
Communications
Legal Affairs
Scientific Development
Strategy & Business Intelligence
Refining & Chemicals segment
Trading & Shipping
Crude Oil Trading
Products & Derivatives Trading
Products Trading
Shipping
Refining & Chemicals
Refining Chem base Europe
Health Security Environment
Refining Petrochemicals Eastern hemisphere
Manufacturing & Projects Division
Refining Petrochemicals Americas
Strategy Development Research
Polymers
Administration
Adhesives (Bostik)
Electroplating (Atotech)
Rubber processing (Hutchinson)
Marketing & Services segment
Marketing & Services
Strategy Marketing Research
Administration
Human Resources
Health, Safety, Security, Environment and Quality
Supply & logistics
Europe
Americas
Africa Middle east
Asia Pacific
Global Businesses
New Energies
Business & operations
Forecasting, Institutional Relations & Communication

Management Report

The items of the Management report including points 1. to 4. were approved by the Board of Directors on February 11, 2014 and have not been updated with subsequent events.

1. Summary of results and financial position

1.1. Overview of the 2013 fiscal year for TOTAL

The year 2013 was marked by the end of the recession in the euro zone in the second quarter and the stability of emerging countries. This improvement was mitigated in the third quarter by the impacts of significant exchange rate fluctuations in emerging markets and the budget debate in the United States.

In this context, global oil demand rose sharply by +1.1 Mb/d[(1)], compared to +0.8 Mb/d in 2012, driven by demand in Asia and the Middle East. Global oil supplies were up moderately in 2013 by +0.4 Mb/d after an increase of +2.3 Mb/d in 2012. Market supplies remained adequate mainly due to the increase in non-conventional oil production in North America, whereas the persistence of geopolitical factors, particularly in Libya, Nigeria and Iraq, put a strain on OPEC production. The oil market environment in 2013 therefore remained relatively stable with a Brent price of $108.7/b compared to $111.7/b in 2012.

Gas spot prices remained stable in Asia in 2013, sustained by demand, and averaged $16/Mbtu. In Europe, gas spot prices increased by more than 20% from $9/Mbtu in 2012 to $11/Mbtu in 2013. Similarly, after a sharp drop due to the abundant supply of natural gas following the development of shale gas, gas spot prices in the United States rose by more than 30% in 2013, averaging $4/Mbtu compared to $3/Mbtu in 2012.

In the downstream, 2013 saw a sharp decline in European refining margins, which was partly offset by a more favorable petrochemicals environment. Given the effect of over-capacities, the continued high Brent price and sluggish demand, the European Refining Margin Indicator (“ERMI”)[(2)] was $17.9/t in 2013, compared to $36.0/t in 2012. For their part, petrochemical margins in Europe and the United States increased during the year by approximately 25% on average as a result of lower raw material prices (naphtha in Europe and Asia, ethane and LPG in the United States).

In this environment, TOTAL’s adjusted net income amounted to €10.7 billion, slightly down from 2012. This result essentially reflects the decrease in net income of the Upstream segment, which was partly offset by the increase in net income of Marketing & Services.

The Upstream segment’s adjusted[(3)] net operating income reached €9.4 billion in 2013, a 16% decrease from the previous year, impacted by a less favorable production mix, an increase in technical costs, especially exploration expenses, and an increase in the effective tax rate. In 2013, the Refining & Chemicals segment benefited from the concrete effects of the synergy and operational efficiency plans and a more favorable petrochemicals environment. This helped offset the sharp decline in refining margins in Europe and allowed adjusted net operating income to remain stable compared with 2012. Finally, the Marketing & Services segment recorded a 39% increase in adjusted net operating income compared with 2012, thanks in particular to improved performance in New Energies, which posted significant losses in 2012, and overall growth in marketing of petroleum products, driven mainly by emerging markets.

Acquisitions were €3.4 billion in 2013, comprised essentially of the acquisition of a 20% stake in the Libra field in Brazil, an additional 6% stake in the Ichthys project in Australia, an additional 1.6% stake in Novatek[(4)], the carry agreement in the Utica shale gas and condensates field in the United States and the bonus for exploration licenses in South Africa, Mozambique and Brazil. Asset sales totaled €3.6 billion, comprised essentially of the sale of TIGF, a 25% stake in the Tempa Rossa field in Italy, the 49% interest in the Voyager upgrader project in Canada, fertilizer operations and all the Exploration & Production assets in Trinidad and Tobago. Thus, of the $15 to 20 billion in sales targeted for the 2012-2014 period, the Group had already sold $13 billion[(5)] in assets at the end of 2013[(6)].

As announced, the intensive investment phase aimed at transforming the Group’s production profile by 2017 reached a peak of $28 billion (€21.3 billion) in 2013. TOTAL financed its investments and dividends while maintaining a sound balance sheet and ended 2013 with a ratio of net debt to equity of 23%. On the strength of this financial soundness and in keeping with its competitive shareholder return policy, the Board of Directors decided to propose at the May 16, 2014 Shareholders’ Meeting a dividend of €2.38/share for 2013, which represents a 3.4% increase for the remaining dividend.

In terms of operations, the Group’s production was impacted by safety issues in Libya and Nigeria, the effects of which were partly offset by the improved situation in Yemen and by the restart of Elgin-Franklin in the North Sea and OML 58 in Nigeria.

With responsibility and transparency, TOTAL reasserts the utmost priority it gives to the safety of operations and its commitment to environmental protection. Thus, the Group further improved its safety performance, with a 14% drop in TRIR[(7)] compared with 2012. For all of its projects conducted in a large number of countries, the Group also places emphasis on Corporate Social Responsibility (CSR) challenges and the development of local economies.

In the Upstream segment, 2013 saw the launch of major projects in Congo, Nigeria, Canada and Russia and the acquisition of interests in high-potential assets, particularly in Brazil with the acquisition of a 20% stake in the Libra field. TOTAL has therefore confirmed its production growth targets and strengthened its prospects beyond 2017. The Group also pursued its ambitious exploration program and made large discoveries in Iraq and Argentina. In 2013, the Group continued to extend its oil and gas acreage by obtaining licenses in promising exploration areas, particularly in Iraq, Brazil, Bolivia and South Africa.

In the Refining & Chemicals segment, the synergy and operational efficiency plans yielded concrete results that, together with a more favorable petrochemicals environment, enabled this segment to record stable income despite an extremely weak refining environment in

(1) IEA data, excluding biofuels and refining gains.
(2) TOTAL’s margin indicator.
(3) Adjusted results are defined as income using replacement cost, adjusted for special items, excluding the impact of changes for fair value from January 1, 2011.
(4) The Group’s interest in Novatek was 16.96% at December 31, 2013.
(5) Dollar amounts represent euro amounts converted at the average exchange rate of 1.3281 $/€ for the full year 2013.
(6) Including other transactions with minority interests.
(7) Total Recordable Injury Rate.

Europe. The year 2013 was also marked by the start of production at the SATORP refinery in Saudi Arabia and by the announcement of the launch of a major investment program to upgrade the Antwerp platform in Belgium and a project to adapt the petrochemicals platform in Carling, France, in order to restore its competitiveness.

In the Marketing & Services segment, the Group's strategy is to optimize its operations in Europe, strengthen its leading positions on the African continent and in the Middle East and expand its presence in the global lubricants market, while at the same time maintaining a profitability target of over 17%. Thus, in 2013, the Group strengthened its leadership in Europe by increasing its network market share with 600 Total Access service stations now deployed in France. TOTAL also continued its expansion in high-growth markets and developed its positions in Egypt and Pakistan. In 2013, the photovoltaic solar energy sector stabilized after two years of sharp price decreases. Against this backdrop, New Energies improved its competitiveness and TOTAL and SunPower (64.65%) announced a number of successful initiatives, including the start-up of the California Valley Solar Ranch solar power plant and the launch of new solar power plant projects in Chile and South Africa.

The process initiated in 2004 to increase R&D budgets continued with expenditures of €949 million in 2013, up nearly 20% compared to 2012, with the aim, in particular, of the continued improvement of the Group's technological expertise in the development of oil and gas resources and the development of solar, biomass, carbon capture and storage technologies in order to contribute to changes in the global energy mix.

1.2. 2013 Group results (1)

(M€)	2013	2012	2011
Sales	189,542	200,061	184,693
Adjusted operating income from business segments (a)	20,779	24,866	24,456
Adjusted net operating income from business segments (a)	11,925	13,351	12,295
Net income (Group share)	8,440	10,609	12,309
Adjusted net income (Group share) (a)	10,745	12,276	11,457
Fully-diluted weighted-average shares (millions)	2,272	2,267	2,257
Adjusted fully-diluted earnings per share (euros) (a) (b)	4.73	5.42	5.08
Dividend per share (euros) (c)	2.38	2.34	2.28
Net-debt-to-equity ratio (as of December 31)	23%	22%	23%
Return on Average Capital Employed (ROACE) (d)	13%	16%	16%
Return on Equity (ROE)	15%	18%	19%
Cash flow from operations	21,473	22,462	19,536
Investments (e)	25,922	22,943	24,541
Divestments	4,814	5,871	8,578

(a) Adjusted results are defined as income using replacement cost, adjusted for special items, excluding the impact of changes for fair value from January 1, 2011.
(b) Based on fully-diluted weighted-average number of common shares outstanding during the period.
(c) Dividend 2013 is subject to the approval by the Shareholder's Meeting on May 16, 2014.
(d) Based on adjusted net operating income and average capital employed at replacement cost.
(e) Including acquisitions.

Market environment	2013	2012	2011
Exchange rate €-$	1.33	1.28	1.39
Brent ($/b)	108.7	111.7	111.3
European Refinery Margin Indicator (ERMI) (a) ($/t)	17.9	36.0	17.4

(a) 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 specific operating conditions.

Adjustments to operating income

(M€)	2013	2012	2011
Special items affecting operating income	(1,237)	(2,342)	(873)
Restructuring charges	(284)	(2)	-
Impairments	(792)	(1,474)	(781)
Other	(161)	(866)	(92)
Effect of changes in fair value	(56)	(9)	45
Pre-tax inventory effect: FIFO vs. replacement cost (a)	(802)	(234)	1,215
Total adjustments affecting operating income	**(2,095)**	**(2,585)**	**387**

(a) See Note 1N to the Consolidated Financial Statements.

(1) Following the application of revised accounting standard IAS 19 effective January 1, 2013, the information for 2012 and 2011 has been restated; however, the impact on such restated results is not significant (see Note 1 of the notes to the Consolidated Financial Statements).

Adjustments to net income (Group share)

(M€)	2013	2012	2011
Special items affecting net income (Group share)	(1,712)	(1,503)	(14)
Gain (loss) on asset sales	(72)	581	1,538
Restructuring charges	(428)	(77)	(122)
Impairments	(586)	(1,112)	(1,014)
Other	(626)	(895)	(416)
Effect of changes in fair value	(44)	(7)	32
After-tax inventory effect: FIFO vs. replacement cost [a]	(549)	(157)	834
Total adjustments affecting net income	**(2,305)**	**(1,667)**	**852**

(a) See Note 1N to the Consolidated Financial Statements.

1.2.1. Sales

Consolidated sales were €189,542 million ($251,731 million), a decrease of 5% compared to 2012 (€200,061 million).

1.2.2. Operating income from business segments

On average, the upstream environment remained stable compared to the previous year with a Brent price of $108.7/b compared to $111.7/b in 2012, and an average realized gas price for the Group's consolidated subsidiaries that increased by 6% to $7.12/Mbtu from $6.74/Mbtu in 2012. In the downstream, the ERMI (European refining margin indicator) decreased sharply to $17.9/t on average compared to $36.0/t in 2012.

The euro-dollar exchange rate averaged 1.33 $/€ compared to 1.28 $/€ in 2012.

In this context, the adjusted operating income from the business segments was €20,779 million, a decrease of 16% compared to 2012[1]. Expressed in dollars[2], adjusted operating income from the business segments was $27.6 billion, a decrease of 14% compared to 2012, due to a lower contribution from the Upstream segment, which was partially offset by a higher contribution from Marketing & Services.

The effective tax rate[3] for the business segments was 55.5% in 2013 compared to 55.3% in 2012.

Adjusted net operating income from the business segments was €11,925 million compared to €13,351 million in 2012, a decrease of 11%. Expressed in dollars, adjusted net operating income from the business segments decreased by 8%.

1.2.3. Net income (Group share)

Adjusted net income decreased by 12% to €10,745 million in 2013 from €12,276 million in 2012. Expressed in dollars, adjusted net income was $14.3 billion, a decrease of 10% compared to 2012.

Adjusted net income excludes the after-tax inventory effect, special items and the effect of changes in fair value:

– The after-tax inventory effect had a negative impact on net income of €549 million in 2013 and a negative impact of €157 million in 2012.

– Changes in fair value had a negative impact on net income of €44 million in 2013 and a negative impact of €7 million in 2012.

– Special items had a negative impact on net income of €1,712 million in 2013, comprised mainly of the loss on the sale of the Voyageur upgrader project in Canada, the impairment of Upstream assets in the Barnett field in the United States and in Syria, charges and write-offs related to the restructuring of Downstream activities in France, partially offset by the gain on the sales of TIGF and Upstream assets in Italy. Special items had a negative impact on net income of €1,503 million in 2012.

The effective tax rate for the Group was 56.8% in 2013 compared to 56.5% in 2012.

On December 31, 2013, there were 2,276 million fully-diluted shares compared to 2,270 million on December 31, 2012.

In 2013, adjusted fully-diluted earnings per share, based on 2,272 million fully-diluted weighted-average shares, was €4.73 compared to €5.42 in 2012, a decrease of 13%.

Expressed in dollars, adjusted fully-diluted earnings per share was $6.28 compared to $6.96 in 2012, a decrease of 10%.

1.2.4. Investments – divestments

Investments, excluding acquisitions and including changes in non-current loans, were €21.3 billion ($28.3 billion) in 2013 compared to €18.5 billion ($23.8 billion) in 2012, an increase reflecting the investments for the large number of Upstream projects under development.

Acquisitions were €3.4 billion ($4.5 billion) in 2013, comprised essentially of the acquisition of an interest in the Libra field in Brazil, an additional 6% stake in the Ichthys project in Australia, an additional 1.6% stake in Novatek[4], the carry on the Utica gas and condensate field in the United States, and the bonuses for exploration permits in South Africa, Mozambique and Brazil.

Asset sales in 2013 were €3.6 billion ($4.7 billion), comprised essentially of the sale of TIGF, a 25% interest in the Tempa Rossa field in Italy, the interest in the Voyageur upgrader project in Canada, some fertilizer activities, and Exploration & Production assets in Trinidad & Tobago. Net investments were €19.5 billion ($25.9 billion) in 2013, an increase of 14% compared to €17.1 billion ($21.9 billion) in 2012. Included in 2013 is €1.6 billion ($2.2 billion) related to the sale of minority equity interests in Total E&P Congo and

(1) Special items affecting operating income from the business segments had a negative impact of €1,237 million in 2013 and a negative impact of €2,342 million in 2012.
(2) Dollar amounts represent euro amounts converted at the average €-$ exchange rate for the period: 1.3281 $/€ for the full year 2013; 1.2848 $/€ for the full year 2012 and 1.3920 $/€ for the full year 2011.
(3) Defined as: (tax on adjusted net operating income)/(adjusted net operating income – income from equity affiliates – dividends received from investments + tax on adjusted net operating income).
(4) The Group's share in Novatek was 16.96% at December 31, 2013.

Block 14 in Angola, which are shown in the financing section of the cash flow statement.

Expressed in dollars, net investments in 2013 increased by 18%, mainly due to an increase in organic investments in the Upstream segment.

1.2.5. Profitability

The ROACE for the Group for 2013 was 13%, compared to 16% in 2012. Return on Equity for 2013 was 15%, compared to 18% in 2012.

1.3. Upstream results

Environment - liquids and gas price realizations[(a)]	2013	2012	2011
Brent ($/b)	108.7	111.7	111.3
Average liquids price ($/b)	103.3	107.7	105.0
Average gas price ($/Mbtu)	7.12	6.74	6.53
Average hydrocarbon price ($/boe)	74.8	77.3	74.9

(a) Consolidated subsidiaries, excluding fixed margins. Effective first quarter 2012, included over/under-lifting valued at market prices.

In 2013, TOTAL benefited from relatively stable Upstream environment compared to 2012. The Group's average realized liquids price and the average realized gas prices for the Group's consolidated subsidiaries have respectively decreased by 4% and increased by 6% in 2013 compared to 2012.

Hydrocarbon production	2013	2012	2011
Liquids (kb/d)	1,167	1,220	1,226
Gas (Mcf/d)	6,184	5,880	6,098
Combined production (kboe/d)	2,299	2,300	2,346

In 2013, hydrocarbon production was 2,299 kboe/d, stable compared to 2012, essentially as a result of:

- +2.5% for start-ups and growth from new projects,
- -1% for normal decline, partially offset by lower maintenance, the restart of production from Elgin/Franklin in the UK North Sea and OML 58 in Nigeria,
- -0.5% for portfolio changes, including mainly the sale of interests in Nigeria, the UK, Colombia, and Trinidad & Tobago, net of higher production corresponding to the increased stake in Novatek, and
- -1% for security issues in Nigeria and Libya, partially offset by improved security conditions in Yemen.

Reserves At December 31,	2013	2012	2011
Liquids (Mb)	5,413	5,686	5,784
Gas (Bcf)	33,026	30,877	30,717
Hydrocarbon reserves (Mboe)	11,526	11,368	11,423

Proved reserves based on SEC rules (based on Brent at 108.02 $/b) were 11,526 Mboe at December 31, 2013. Based on the 2013 average rate of production, the reserve life is more than thirteen years.

The 2013 proved reserve replacement rate[(1)], based on SEC rules, was 119%.

The 2013 organic proved reserve replacement rate[(2)] was 109%.

At year-end 2013,TOTAL had a solid and diversified portfolio of proved and probable reserves[(3)] representing more than twenty years of reserve life based on the 2013 average production rate, and resources[(4)] representing about fifty years of production.

Effective July 1, 2012, the Upstream segment no longer includes the activities of New Energies, which are now reported with Marketing & Services. As a result, certain information has been restated according to the new organization.

Results (M€)	2013	2012	2011
Adjusted operating income[(a)]	17,854	22,056	22,648
Adjusted net operating income[(a)]	9,370	11,145	10,631
Cash flow from operations	16,457	18,950	17,044
Adjusted cash flow from operations	16,575	18,306	17,661
Investments	22,396	19,618	20,662
Divestments	4,353	2,798	2,591
Return on Average Capital Employed	14%	18%	21%

(a) Following the application of revised accounting standard IAS 19 effective January 1, 2013, the information for 2012 and 2011 has been restated; however, the impact on such restated results is not significant (see note 1 of the notes to the Consolidated Financial Statements).

(1) Change in reserves excluding production (revisions + discoveries, extensions + acquisitions – divestments)/production for the period.
(2) The reserve replacement rate in a constant oil price environment of 111.13 $/b (reference price in 2012), excluding acquisitions and divestments.
(3) Limited to proved and probable reserves covered by Exploration & Production contracts on fields that have been drilled and for which technical studies have demonstrated economic development in a 100 $/b Brent environment, including projects developed by mining.
(4) Proved and probable reserves plus contingent resources (potential average recoverable reserves from known accumulations – Society of Petroleum Engineers – 03/07).

Adjusted net operating income from the Upstream segment in 2013 was €9,370 million compared to €11,145 million in 2012, a decrease of 16%. Expressed in dollars, adjusted net operating income from the Upstream segment was $12.4 billion, a decrease of 13%, mainly due to a less favorable production mix, higher technical costs, particularly for exploration, and a higher tax rate for the Upstream segment.

The effective tax rate for the Upstream segment was 60.1% in 2013 compared to 58.4% in 2012.

Technical costs for consolidated subsidiaries, in accordance with ASC 932[1], were 26.1 $/boe in 2013 compared to 22.8 $/boe in 2012, notably due to increased depreciation of tangible assets relating to major project start-ups as well as increased exploration expenses.

The Return on Average Capital Employed (ROACE[2]) for the Upstream segment was 14% for the full-year 2013 compared to 18% for the full-year 2012.

1.4. Refining & Chemicals results

Operational data[(a)]	2013	2012	2011
Total refinery throughput (kb/d)[(a)]	1,719	1,786	1,863

(a) Includes share of CEPSA, through July 31, 2011, and of TotalErg. Results for refineries in South Africa, French Antilles and Italy are reported in the Marketing & Services segment.

For the full-year 2013, refinery throughput decreased by 4% compared to the previous year, reflecting essentially a turnaround at the Antwerp refinery, higher maintenance at the Donges refinery, voluntary shutdowns in response to weak refining margins in late 2013, and the closure of the Rome refinery at the end of the third quarter 2012.

Results (M€)	2013	2012	2011
Adjusted operating income[(a)]	1,329	1,455	609
Adjusted net operating income[(a)]	1,404	1,376	842
Including Specialty Chemicals[(a)]	*440*	*383*	*424*
Cash flow from operations	3,211	2,127	2,146
Adjusted cash flow from operations	2,239	2,170	1,318
Investments	2,039	1,944	1,910
Divestments	275	304	2,509
Return on Average Capital Employed	9%	9%	5%

(a) Following the application of revised accounting standard IAS 19 effective January 1, 2013, the information for 2012 and 2011 has been restated; however, the impact on such restated results is not significant (see Note 1 of the notes to the Consolidated Financial Statements).

In 2013, the ERMI was on average 17.9 $/t, a decrease of 50% compared to 2012. Petrochemical margins remained at high levels, particularly in the United States.

For the full-year 2013, adjusted net operating income from the Refining & Chemicals segment was €1,404 million, an increase of 2% compared to the €1,376 million in 2012. Expressed in dollars, adjusted net operating income was $1.9 billion, an increase of 5% compared to 2012, despite the 50% decrease in refining margins. The increase was due in part to the tangible results realized from the implementation of planned synergies and operational efficiencies and to a more favorable environment for petrochemicals that offset the sharp decline in European refining margins.

In addition, the SATORP integrated refinery in Saudi Arabia has begun to export refined products after the successful start-up of its first units.

The ROACE[2] for the Refining & Chemicals segment was 9% for the full-year 2013, stable compared to the full-year 2012.

(1) FASB Accounting Standards Codification Topic 932, Extractive industries – Oil and Gas.
(2) Calculated based on adjusted net operating income and average capital employed, using replacement cost.

1.5. Marketing & Services results

Operational data[a]	2013	2012	2011
Refined products sales (kb/d)	1,749	1,710	1,987

(a) Excludes trading and bulk sales, included sales of CEPSA through July 31, 2011 and of TotalErg.

Overall for the full-year 2013, sales volumes increased by 2% compared to the previous year, due to growth in Africa and the Americas, partially offset by a decrease in Europe.

Effective July 1, 2012, Marketing & Services now includes the activities of New Energies. As a result, certain information has been restated according to the new organization.

Results (M€)	2013	2012	2011
Sales	83,481	86,614	85,325
Adjusted operating income[a]	1,596	1,355	1,199
Adjusted net operating income[a]	1,151	830	822
Including New Energies[a]	*(2)*	*(169)*	*(197)*
Cash flow from operations	1,926	1,132	541
Adjusted cash flow from operations	1,853	1,192	1,103
Investments	1,365	1,301	1,834
Divestments	141	152	1,955
Return on Average Capital Employed	16%	12%	13%

(a) Following the application of revised accounting standard IAS 19 effective January 1, 2013, the information for 2012 and 2011 has been restated; however, the impact on such restated results is not significant (see Note 1 of the notes to the Consolidated Financial Statements).

For the full-year 2013, Marketing & Services sales were €83.5 billion, a decrease of 4% compared to 2012.

Adjusted net operating income from the Marketing & Services segment in 2013 was €1,151 million compared to €830 million in 2012, an increase of 39% reflecting essentially the improvement in the performance of the New Energies, which had particularly negative results in 2012, as well as the overall improvement made in refined products marketing, particularly in emerging markets.

The ROACE[1] for the Marketing & Services segment was 16% for the full-year 2013 compared to 12% for the full-year 2012.

1.6. TOTAL S.A. results in 2013

Net income from Statutory Financial Statements of TOTAL S.A., the parent company, was €6,031 million in 2013, compared to €6,520 million in 2012.

1.7. Proposed dividend

After closing the 2013 accounts, the Board of Directors decided to propose at the May 16, 2014, Annual Shareholders Meeting a €2.38/share dividend for 2013, which represents a 3.4% increase for the remaining dividend[2]. Taking into account the interim dividends for the first three quarters of 2013 approved by the Board of Directors, the remaining 2013 dividend would increase to €0.61/share and be paid on June 5, 2014.

Total's dividend pay-out ratio, based on the adjusted net income for 2013, would be 50%.

(1) Calculated based on adjusted net operating income and average capital employed, using replacement cost.
(2) The ex-dividend date for the remainder of the 2013 dividend would be June 2, 2014 and the payment date June 5, 2014.

2. Liquidity and capital resources

2.1. Long-term and short-term capital

Long-term capital
As of December 31,

(M€)	2013	2012	2011
Shareholders' equity [a]	73,548 [a]	71,166	67,042
Non-current financial debt	25,069	22,274	22,557
Hedging instruments of non-current financial debt	(1,028)	(1,626)	(1,976)
Total net non-current capital	**97,589**	**91,814**	**87,623**

(a) Based on a 2013 dividend of €2.38 per share.

Short-term capital
As of December 31,

(M€)	2013	2012	2011
Current borrowings	8,116	11,016	9,675
Net current financial assets	(260)	(1,386)	(533)
Net current financial debt	**7,856**	**9,630**	**9,142**
Cash and cash equivalents	(14,647)	(15,469)	(14,025)

2.2. Cash flow

(M€)	2013	2012	2011
Cash flow from operating activities	21,473	22,462	19,536
Investments	(25,922)	(22,943)	(24,541)
Total divestments	4,814	5,871	8,578
Other transactions with minority interests	1,621	1	(573)
Net cash flow (1)	**1,986**	**5,390**	**3,000**
Dividends paid	(5,485)	(5,288)	(5,312)
Purchase of treasury shares	(179)	(68)	-
Net-debt-to-equity ratio at December 31	23%	22%	23%

Cash flow from operations was €21,473 million ($28.5 billion) a decrease of 4% compared to 2012, reflecting the decrease in net income, partially offset by the change in working capital between the two periods.

Adjusted cash flow from operations (2) was €20,345 million in 2013, a decrease of 6%. Expressed in dollars, adjusted cash flow from operations was $27.0 billion, a decrease of 3% compared to 2012.

The Group's net cash flow (1) was €1,986 million ($2.6 billion) in 2013 compared to €5,391 million ($6.9 billion) in 2012.

The net-debt-to-equity ratio was 23.3% on December 31, 2013 compared to 21.9% on December 31, 2012.

(1) Net cash flow = cash flow from operations – net investments (including other transactions with minority interests).
(2) Cash flow from operations at replacement cost before changes in working capital.

2.3. Borrowing requirements and funding structure

The Group's policy consists of incurring non-current debt primarily at a floating rate or, if the opportunity arises at the time of an issuance, at a fixed rate. Debt is incurred in dollars or euros according to general Corporate needs. Long-term interest rate and currency swaps may be used to hedge bonds at their issuance in order to create a variable or fixed rate synthetic debt. In order to partially modify the interest rate structure of the long-term debt, TOTAL may also enter into long-term interest rate swaps.

The non-current debt is generally raised by the Corporate treasury entities either directly in dollars or euros or in other currencies which are then exchanged for dollars or euros through swap issues to appropriately match general Corporate needs.

The Group has established standards for market transactions under which bank counterparties must be approved in advance, based on an assessment of the counterparty's financial soundness (multi-criteria analysis including a review of the market capitalization and of the Credit Default Swap (CDS), its ratings with Standard & Poor's and Moody's, which must be of high quality, and its overall financial condition).

An overall authorized credit limit is set for each bank and is allotted among the subsidiaries and the Group's central treasury entities according to their needs.

To reduce the market values risk on its commitments, in particular for swaps set as part of bonds issuance, the Group also developed a system of margin call that is implemented with significant counterparties.

2.4. External financing available

As of December 31, 2013, the aggregate amount of the major confirmed credit facilities granted by international banks to the Group's companies (including TOTAL S.A.) was $11,581 million (compared with $11,328 million on December 31, 2012), of which $11,421 million were unused ($10,921 million unused as of December 31, 2012).

TOTAL S.A. has confirmed lines of credit granted by international banks, which are calculated to allow it to manage its short-term liquidity needs as required. As of December 31, 2013, these credit facilities amounted to $11,031 million (compared with $10,519 million on December 31, 2012), of which $11,031 million were unused ($10,463 million unused as of December 31, 2012).

The agreements for the lines of credit granted to TOTAL S.A. do not contain conditions related to the Company's financial ratios, to its financial ratings from specialized agencies, or to the occurrence of events that could have a material adverse effect on its financial position.

Credit facilities granted to Group companies other than TOTAL S.A. are not intended to finance the Group's general needs; they are intended to finance either the general needs of the borrowing subsidiary or a specific project.

As of December 31, 2013, no restrictions applied to the use of the Group companies' capital (including TOTAL S.A.) that could significantly impact the Group's activities, directly or indirectly.

2.5. Anticipated sources of financing

Investments, working capital and dividend payments are financed essentially by the cash flow generated from operating activities, asset disposals and, if necessary, by net borrowings.

For the coming years and based on the current financing conditions, the Company intends to maintain this method of financing the Group's investments and activities.

3. Research & Development

In 2013, Research & Development (R&D) expenses amounted to €949 million, compared with €805 million in 2012 and €776 million in 2011. The process initiated in 2004 to increase R&D budgets continued in 2013.

In 2013, 4,684 people were dedicated to R&D activities, compared with 4,110 in 2012 and 3,946 in 2011. This is mainly due to changes in the scope of the Group's activities.

There are six major R&D focuses at TOTAL:

– developing knowledge, tools and technological mastery to discover and profitably operate complex oil and gas resources to help meet the global demand for energy;

– developing and industrializing solar, biomass and carbon capture and storage technologies to help prepare for future energy needs;

– developing practical, innovative and competitive materials and products that meet customers' specific needs, contribute to the emergence of new features and systems, enable current materials to be replaced by materials showing higher performance for users, and address the challenges of improved energy efficiency, lower environmental impact and toxicity, better management of their life cycle and waste recovery;

– developing, industrializing and improving first-level competitive processes for the conversion of oil, coal and biomass resources to adapt to changes in resources and markets, improve reliability and safety, achieve better energy efficiency, reduce the environmental footprint and maintain the Group's economic margins in the long term;

– understanding and measuring the impacts of the Group's operations and products on ecosystems (water, soil, air, biodiversity) and recovering waste to improve environmental safety, as part of the regulation in place, and reduce their environmental footprint to achieve sustainability in the Group's operations; and

– mastering and using innovative technologies such as biotechnologies, materials sciences, nanotechnologies, high-performance computing, information and communications technologies and new analytic techniques.

These issues are addressed synergistically within a portfolio of projects. Different aspects may be looked at independently by different divisions.

The portfolio managed by the entity tasked with developing SMEs specialized in innovative energy technologies and cleantechs has grown regularly since 2009.

3.1. Upstream segment

3.1.1. Exploration & Production

In addition to continuously optimizing the development of deep-offshore projects and gas resources, TOTAL continues to improve its computing, exploration, seismic acquisition and processing tools over the long term as well as those for the initial appraisal of hydrocarbon reservoirs and simulation of field evolution during operations, especially for tight, very deep or carbonated reservoirs.

R&D activity has been intensified in the field of unconventional resources, with a strong focus on water management throughout the production cycle and the search for alternatives to hydraulic fracking.

A new direction is being taken to carry out deep offshore operations in even deeper waters, on the one hand, and at greater distances for multiphase production transport, on the other hand, which is fully in line with the ambitious goals of Exploration & Production and supports major technology-intensive assets such as Libra in Brazil (see point 2.1.7.3. of Chapter 2).

Enhancing oil recovery from mature reservoirs and recovery of heavy oil and bitumen with lesser environmental impacts are also subjects involving very active research. In particular, new technologies for the exploitation of oil shales by pyrolysis are being developed, both *in situ* and *ex situ*.

The oxycombustion CO_2 capture and storage project in the depleted Rousse reservoir in Lacq (France) is now in the monitoring phase following the injection phase, which ended in April 2013. The Group now has a strong command of the methods used to characterize reservoirs for this type of injection. New projects will look into new and more economical capturing solutions.

Finally, water management and the production of hydrocarbons are still the subject of increased R&D activities. This subject is now part of a larger program dedicated to acceptability.

3.1.2. Gas & Power

The program to develop new LNG solutions is continuing.

3.2. Refining & Chemicals segment

3.2.1. Refining & Chemicals

The aim of R&D is to support the medium and long-term development of Refining & Chemicals. In doing so, it contributes to the technological differentiation of this business through the development, implementation and promotion of effective R&D programs that pave the way for the industrialization of knowledge, processes and technologies.

In line with the Refining & Chemicals strategy, R&D places special emphasis on the following four major challenges: take advantage of different types of feedstock, optimize the value of assets, continue to develop innovative products, and develop bio-sourced products. The medium-term strategy of the project portfolio and its deployment plan will facilitate Refining & Chemicals' technological differentiation.

To take advantage of different types of feedstock, R&D activities related to the processing of more diversified crudes have increased significantly through a better understanding of the effect that feedstocks have on equipment and processes at the molecular level. R&D is launching ambitious new programs to develop various technologies for producing liquid fuels, monomers and intermediates from gas.

R&D is developing know-how and technologies with a view to optimizing the value of assets. Its efforts mainly involve programs focusing on the flexibility and availability of facilities. Advanced modeling of feedstocks and processes helps the units overcome their processing-related constraints and operate in real time with these constraints in mind. Research conducted on catalysts is helping to increase their resistance to poisons, improve catalytic stability and extend cycle time at a lower cost. Programs are being set up to maximize the value of heavy residues.

In response to concerns related to social and environmental acceptability, R&D focuses its efforts on reducing emissions, with the aim of ensuring that the facilities' environmental impact is limited. In anticipation of problems that arise over the long term and the value of CO_2, R&D is developing technologies to significantly reduce greenhouse gas emissions through the use of carbon capture and conversion.

Product innovation is a key aspect of research on polymers. R&D draws on its knowledge of metallocenes and bimodality to develop different types of mass consumption polymers which have exceptional properties that allow them to replace heavier materials and compete with technical polymers. Value-added niche polymers are also being developed, whether in the form of blends, compounds or composites. Efforts to diversify into "green" products are focused mainly on bioproducts endorsed by the market: biomonomers, biointermediates and biopolymers. R&D is banking on polylactic acid for the market launch of new polymers that boast improved properties. In addition, the development of blends, compounds and composites broadens the scope of application of polylactic acid-based polymers.

With regard to biofuels, R&D has focused its efforts on gasification and coprocessing to produce liquid fuels from biomass. R&D is also particularly mindful of issues related to blends and product quality raised by the use of biomolecules.

The efficient use of resources and the management of plastics at the end of their useful life are topics of growing interest. R&D is therefore developing technologies that enable plastics to be used more efficiently as feedstock.

3.2.2. Specialty Chemicals

R&D has strategic importance for the Specialty Chemicals. It is closely linked to the needs of subsidiaries and industrial customers.

Hutchinson's R&D is built around two key areas:

- materials, with the development of next-generation thermoplastic alloys and high-performance rubber formulas, as efforts to protect the environment create new opportunities; and
- a shift from products to systems, based on advanced functions such as thermal and acoustic management.

Bostik is focusing its research activities on three technology platforms: hot-melt adhesives, reactive elastomers and hydraulic polymer-binder systems. Based on these technologies, R&D is developing practical, sustainable assembly solutions that meet the needs of markets in terms of energy efficiency (construction, transport), material efficiency (health, industry) and environmental impacts throughout their life cycle.

Atotech is one of the world leaders for integrated production systems (chemicals, equipment, know-how and service) for industrial surface finishing and the manufacturing of integrated circuits. Given the environmental challenges related to electroplating, nearly half of Atotech's R&D projects are intended to develop cleaner technologies and create conditions for the Sustainable Development of these industries.

3.3. Marketing & Services segment

3.3.1. Marketing & Services

In 2013, in response to the roadmap and the new scope of Marketing & Services, R&D reorganized its business areas. In anticipation of changes in technologies, the main lines of research involve the design of new higher-quality, high-performance products to support the international development of the businesses: fuel economy (fuels, lubricants, additives), energy efficiency (bitumen), anticipation of regulatory changes (marine lubricants) and blending of bio-sourced molecules (aviation fuels and special fluids).

The development of the future range of Excellium fuels, which focus mainly on fuel economy and "engine" cleanliness, has made it possible to validate and integrate new molecules (friction modifier/anti-lacquering) as well as a new detergent technology developed in-house.

The Fuel Eco lubricant range was expanded with many new products added to comply with the specifications of manufacturers targeted by the Total Lubrifiants business line. New marine lubricants for two-stroke engines are being developed to anticipate changes in fuel (very low sulfur rate in coastal areas) and emissions requirements.

To meet energy efficiency requirements by reducing application temperatures, a new bitumen has been developed and released on the European market. The formulation of a sulfur-free specialty bitumen, aimed at reducing users' exposure to H2S, is continuing.

New formulations of broader spectrum cold flow properties additives that include an exclusive booster for distillates have been developed and are being sold. The multi-partner CAER (alternative aviation fuels) project certified by the Directorate General for Aviation has been launched. The aim of this project is to understand the behavior of new components, from Upstream logistics to Downstream turbojet operation.

The conditions related to the hydroprocessing of local feedstocks were determined based on future special fluids production units and the initial tests on renewable feedstock pilot programs.

Finally, researchers have also demonstrated their know-how and expertise in the competitive arena by developing brand new products (fuels and lubricants for racing teams that were again world champions in 2013), products and technologies that are later adapted to consumer products.

3.3.2. New Energies

R&D efforts in New Energies cover both the production processes of SunPower cells, which aim to speed up the reduction of production costs, and the future generations of photovoltaic cells, as part of several partnerships with recognized academic research institutes and start-ups. In particular, TOTAL is a partner in the important institutional project, IPVF, launched by the Université Paris-Saclay.

Energy production from biomass is the other major R&D challenge in the development of New Energies. Through its own biotechnology research team, the Group is taking part in a program to develop several production processes using biomass, and in biotechnological projects to transform the biomass into advanced biofuels or molecules that can be used in chemical applications. The Group's main partnership is with Amyris, in which the Group holds a stake.

3.4. Environment

Environmental issues are important throughout the Group and are taken into account in all R&D projects. R&D's effort is to ensure optimum management of environmental risk, particularly as regards:

- water management, notably by reducing the use of water from natural continental environments and by lowering emissions in compliance with local, national and international regulations;
- reduction of greenhouse gas emissions by improving energy efficiency and the monitoring of carbon capture and storage and the potential effects of CO_2 on the natural environment;
- detection and reduction of emissions into the air and simulation of their dissemination;
- prevention of soil contamination and regulatory compliance with regard to historical aspects and the rehabilitation of sites;
- changes in the Group's different products and management of their life cycle, in particular in compliance with the REACH Directive.

For more information, refer to Chapter 7.

3.5. R&D organization

The Group intends to increase R&D in all of its sectors through cross-functional themes and technologies. Attention is paid to synergies of R&D efforts between business units.

The Group has twenty-one R&D sites worldwide and has developed approximately 600 partnerships with other industrial groups and academic or highly specialized research institutes. TOTAL also has a permanently renewed network of scientific advisors worldwide that monitor and advise on matters of interest to the Group's R&D activities. Long-term partnerships with universities and academic laboratories, deemed strategic in Europe, the United States, Japan and China, as well as innovative small businesses are part of the Group's approach.

Each segment is developing an active intellectual property activity, aimed at protecting its innovations, allowing its activity to develop without constraints as well as facilitating its partnerships. In 2013, more than 250 new patent applications were issued by the Group.

4. Trends and outlook

4.1. Outlook

After reaching a peak of $28 billion in 2013, the organic investment budget was reduced to $26 billion in 2014, more than 80% of which will be dedicated to Upstream. Moreover, all the Group's segments are making efforts to control their investments and reduce their operating costs while continuing to make safety an absolute priority.

Of the $15 to 20 billion in sales targeted for the 2012-2014 period, the Group had already sold $13 billion[1] in assets at the end of 2013. The proposed sales being negotiated and reviewed should enable TOTAL to reach, and possibly exceed, the announced target.

In the Upstream segment, TOTAL confirmed its production growth targets of 2.6 Mboe/d by 2015 and the potential for 3 Mboe/d by 2017. Nearly all the projects needed to achieve these targets are now either in production or in the development phase. In 2014, after the expiration of the ADCO license, production will benefit from a ramp-up of recently started projects and from the start-up of TOTAL-operated projects like CLOV in Angola, Laggan-Tormore in the UK and Ofon Phase 2 in Nigeria.

TOTAL is pursuing its ambitious exploration program with a stable budget of $2.8 billion. This program includes, in particular, high-potential drilling in Brazil, the Kwanza Basin in Angola, Ivory Coast and South Africa.

In the Refining & Chemicals segment, the productivity gains and synergies resulting from the ongoing restructuring should continue in 2014 and contribute, in a constant environment, to the improvement in the segment's profitability. Also in 2014, the start-up of the last units of the SATORP refinery in Jubail, Saudi Arabia will make this new integrated platform fully operational.

The Marketing & Services segment will develop its positions in the most high-growth markets and continue to optimize its positions in Europe. New Energies, at breakeven in 2013, should continue to benefit from ongoing efforts at SunPower focusing on productivity, development and innovation.

Since the start of the year 2014, the environment has remained favorable in the upstream, while refining margins have continued to deteriorate significantly in Europe.

The Group confirms its commitment in favor of a competitive policy for returns to shareholders, in keeping with its objective of sustainable growth.

4.2. Risks and uncertainties

Due to the nature of its business, the Group's activities remain subject to the usual market risks (sensitivity to the environmental parameters of the oil and financial markets), industrial and environmental risks related to its operations, and to political or geopolitical risks stemming from the global presence of most of its activities.

Risks relative to cash management operations and to interest rate and foreign exchange financial instruments are managed according to rules set by the Group's General Management, which provide for regular pooling of available cash balances, open positions and management of the financial instruments by the Group's General Management.

Detailed information is given in the Risk Factors section (Chapter 4) of this Registration Document. For more information, also refer to the Chairman's report in point 1.10. of Chapter 5.

4.3. Sensitivity of the 2014 results to market environment [a]

Market environment parameters	Scenario	Change	Estimated impact on adjusted operating income	Estimated impact on adjusted net operating income
Dollar	$1.30/€	+$0.1 per €	-1.65 B€	-0.95 B€
Brent	$100/b	+$1/b	+0.30 B$	+0.15 B$
European refining margins (ERMI)	$30/t	+$1/t	0.08 B$	0.05 B$

(a) Sensitivities revised once per year upon publication of the previous year's fourth quarter results. Indicated sensitivities are approximate and based upon TOTAL's current view of its 2014 portfolio. Results may differ significantly from the estimates implied by the application of these sensitivities. The impact of the €-$ sensitivity on adjusted operating income and adjusted net operating income attributable to the Upstream segment is approximately 80% and 70% respectively. The remaining impact of the sensitivity is essentially in the Refining & Chemicals segment.

(1) Including other transactions with minority interests (sale of minority equity interests in Total E&P Congo and Block 14 in Angola).

5. Significant changes

On February 4, 2014, TOTAL signed an agreement to sell its 15% interest in the offshore Block 15/06 in Angola to Sonangol E&P. The amount of the transaction was $750 million and is subject to approval by the authorities.

The accounting effects of this sale, which occurred after the close of the Consolidated Financial Statements for the year ended December 31, 2013 by TOTAL's Board of Directors, will be reflected in TOTAL S.A.'s intermediate Consolidated Financial Statements for the first quarter of 2014.

This information supplements the information provided in Chapter 2 concerning the Group's activities in Angola (point 2.1.7.1.) and in paragraph E) of Note 4 to the Consolidated Financial Statements for the 2013 fiscal year (Chapter 10, point 7.).

Except for the events mentioned above in the Management Report of the Board of Directors (Chapter 3), in the Business overview (Chapter 2), or in the description of litigations (Chapter 4, point 4.) no significant changes in the Group's financial or commercial position have occurred since December 31, 2013, the end of the last fiscal year for which audited financial statements have been published by the Company.

Risk factors

1. Financial risks

Financial risks are detailed in Note 31 to the Consolidated Financial Statements (point 7., Chapter 10).

1.1. Sensitivity to market environment

The financial performance of TOTAL is sensitive to a number of factors, the most significant being crude oil and natural gas prices, refining margins and exchange rates, in particular that of the dollar versus the euro.

Generally, a rise in the price of crude oil has a positive effect on earnings as a result of an increase in revenues from oil and gas production. Conversely, a decline in crude oil prices reduces revenues. For the year 2014, according to the scenarios retained, the Group estimates that an increase or decrease of $1.00 per barrel in the price of Brent crude would respectively increase or decrease the annual adjusted net operating income by approximately €0.12 billion ($0.15 billion[1]). The impact of changes in crude oil prices on downstream operations depends upon the speed at which the prices of finished products adjust to reflect these changes. The Group estimates that an increase or decrease in European refining margins (ERMI) of $1.00 per ton would increase or decrease the annual adjusted net operating income by approximately €0.04 billion ($0.05 billion[1]).

All of the Group's activities are, to various degrees, sensitive to fluctuations in the dollar/euro exchange rate. The Group estimates that a strengthening or weakening of the dollar against the euro by $0.10 per euro would respectively improve or reduce the annual adjusted net operating income, expressed in euro, by approximately €0.95 billion.

The Group's results, particularly in the Chemicals activity, also depend on the overall economic environment.

Summary of sensitivities 2013[a]	Scenario retained	Change	Estimated impact on adjusted operating income	Estimated impact on adjusted net operating income
€-$	1.30 $/€	+ $0.10 per €	-1.65 B€	-0.95 B€
Brent	100 $/b	+1 $/b	+0.23 B€/0.30 B$	+0.12 B€/0.15 B$
European refining margins (ERMI)	30 $/t	+1 $/t	+0.06 B€/0.08 B$	+0.04 B€/0.05 B$

(a) Sensitivities revised once per year upon publication of the previous year's fourth quarter results. The impact of the €-$ sensitivity on adjusted operating income and adjusted net operating income attributable to the Upstream segment are approximately 80% and 70% respectively. The remaining impact of the sensitivity is essentially on the Refining & Chemicals segment. Indicated sensitivities are estimates based upon assumptions of the Group's portfolio in 2014. Results may differ significantly from the estimates implied by the application of these sensitivities.

1.2. Oil and gas market related risks

Due to the nature of its business, the Group has significant oil and gas trading activities as part of its day-to-day operations in order to optimize revenues from its oil and gas production and to obtain favorable pricing to supply its refineries.

In its international oil trading business, the Group follows a policy of not selling its future production. However, in connection with this trading business, the Group, like most other oil companies, uses energy derivative instruments to adjust its exposure to price fluctuations of crude oil, refined products, natural gas, power and coal. The Group also uses freight rate derivative contracts in its shipping business to adjust its exposure to freight-rate fluctuations. To hedge against this risk, the Group uses various instruments such as futures, forwards, swaps and options on organized markets or over-the-counter markets. The list of the different derivatives held by the Group in these markets is detailed in Note 30 to the Consolidated Financial Statements.

The Trading & Shipping division measures its market risk exposure, *i.e.,* potential loss in fair values, on its crude oil, refined products and freight rates trading activities using a value-at-risk technique. This technique is based on an historical model and makes an assessment of the market risk arising from possible future changes in market values over a 24-hour period. The calculation of the range of potential changes in fair values takes into account a snapshot of the end-of-day exposures and the set of historical price movements for the last 400 business days for all instruments and maturities in the global trading activities. Options are systematically re-evaluated using appropriate models.

The potential movement in fair values corresponds to a 97.5% value-at-risk type confidence level. This means that the Group's portfolio result is likely to exceed the value-at-risk loss measure once over 40 business days if the portfolio exposures were left unchanged.

(1) Calculated with a base case exchange rate of $1.30 per €1.00.

Trading & Shipping: value-at-risk with a 97.5% probability

As of December 31, (M€)	High	Low	Average	Year end
2013	9.9	3.5	6.2	7.1
2012	13.0	3.8	7.4	5.5
2011	10.6	3.7	6.1	6.3

As part of its gas, power and coal trading activity, the Group also uses derivative instruments such as futures, forwards, swaps and options in both organized and over-the-counter markets. In general, the transactions are settled at maturity date through physical delivery. The Gas & Power division measures its market risk exposure, *i.e.,* potential loss in fair values, on its trading business using a value-at-risk technique. This technique is based on an historical model and makes an assessment of the market risk arising from possible future changes in market values over a one-day period. The calculation of the range of potential changes in fair values takes into account a snapshot of the end-of-day exposures and the set of historical price movements for the past two years for all instruments and maturities in the global trading business.

Gas & Power trading: value-at-risk with a 97.5% probability

As of December 31, (M€)	High	Low	Average	Year end
2013	9.0	2.0	4.0	5.0
2012	20.9	2.6	7.4	2.8
2011	21.0	12.7	16.0	17.6

The Group has implemented strict policies and procedures to manage and monitor these market risks. These are based on the separation of control and front-office functions and on an integrated information system that enables real-time monitoring of trading activities.

Limits on trading positions are approved by the Group's Executive Committee and are monitored daily. To increase flexibility and encourage liquidity, hedging operations are performed with numerous independent operators, including other oil companies, major energy producers or consumers and financial institutions. The Group has established counterparty limits and monitors outstanding amounts with each counterparty on an ongoing basis.

1.3. Financial markets related risks

As part of its financing and cash management activities, the Group uses derivative instruments to manage its exposure to changes in interest rates and foreign exchange rates. These instruments are mainly interest rate and currency swaps. The Group may also occasionally use futures contracts and options. These operations and their accounting treatment are detailed in Notes 1 paragraph M, 20, 28 and 29 to the Consolidated Financial Statements.

Risks relative to cash management operations and to interest rate and foreign exchange financial instruments are managed according to rules set by the Group's senior management, which provide for regular pooling of available cash balances, open positions and management of the financial instruments by the Treasury Department. Excess cash of the Group is deposited mainly in government institutions, deposit banks, or major companies through deposits, reverse repurchase agreements and purchase of commercial paper. Liquidity positions and the management of financial instruments are centralized by the Treasury Department, where they are managed by a team specialized in foreign exchange and interest rate market transactions.

The Cash Monitoring-Management Unit within the Treasury Department monitors limits and positions per bank on a daily basis and results of the Front Office. This unit also prepares marked-to-market valuations of used financial instruments and, when necessary, performs sensitivity analysis.

1.4. Counterparty risk

The Group has established standards for market transactions under which bank counterparties must be approved in advance, based on an assessment of the counterparty's financial soundness (multi-criteria analysis including a review of market prices and of the Credit Default Swap (CDS), its ratings with Standard & Poor's and Moody's, which must be of high quality, and its overall financial condition).

An overall authorized credit limit is set for each bank and is allotted among the subsidiaries and the Group's central treasury entities according to their needs.

To reduce the market values risk on its commitments, in particular for swaps set as part of bonds issuance, the Treasury Department also developed a system of margin call that is gradually implemented with significant counterparties.

1.5. Currency exposure

The Group seeks to minimize the currency exposure of each entity to its functional currency (primarily the euro, the dollar, the pound sterling and the Norwegian krone).

For currency exposure generated by commercial activity, the hedging of revenues and costs in foreign currencies is typically performed using currency operations on the spot market and, in some cases, on the forward market. The Group rarely hedges future cash flows, although it may use options to do so.

With respect to currency exposure linked to non-current assets booked in a currency other than the euro, the Group has a policy of reducing the related currency exposure by financing these assets in the same currency.

Net short-term currency exposure is periodically monitored against limits set by the Group's senior management.

The non-current debt described in Note 20 to the Consolidated Financial Statements is generally raised by the Corporate treasury entities either directly in dollars or in euros, or in other currencies which are then exchanged for dollars or euros through swaps issues to appropriately match general Corporate needs. The proceeds from these debt issuances are loaned to affiliates whose accounts are kept in dollars or in euros. Thus, the net sensitivity of these positions to currency exposure is not significant.

The Group's short-term currency swaps, the notional value of which appears in Note 29 to the Consolidated Financial Statements, are used to attempt to optimize the centralized cash management of the Group. Thus, the sensitivity to currency fluctuations which may be induced is likewise considered negligible.

1.6. Short-term interest rate exposure and cash

Cash balances, which are primarily composed of euros and dollars, are managed according to the guidelines established by the Group's senior management (maintain an adequate level of liquidity, optimize revenue from investments considering existing interest rate yield curves, and minimize the cost of borrowing) over a less than twelve-month horizon and on the basis of a daily interest rate benchmark, primarily through short-term interest rate swaps and short-term currency swaps, without modifying currency exposure.

1.7. Interest rate risk on non-current debt

The Group's policy consists of incurring non-current debt primarily at a floating rate, or, if the opportunity arises at the time of an issuance, at a fixed rate. Debt is incurred in dollars or in euros according to general Corporate needs. Long-term interest rate and currency swaps may be used to hedge bonds at their issuance in order to create a variable or fixed rate synthetic debt. In order to partially modify the interest rate structure of the long-term debt, TOTAL may also enter into long-term interest rate swaps.

1.8. Sensitivity analysis on interest rate and foreign exchange risk

The tables below present the potential impact of an increase or decrease of 10 basis points on the interest rate yield curves for each of the currencies on the fair value of the current financial instruments as of December 31, 2013, 2012, and 2011.

Assets/(Liabilities) (M€)	Carrying amount	Estimated fair value	Change in fair value due to a change in interest rate by: +10 basis points	-10 basis points
As of December 31, 2013				
Bonds (non-current portion, before swaps)	(24,028)	(24,629)	39	(39)
Swaps hedging fixed-rates bonds (liabilities)	*(236)*	*(236)*	-	-
Swaps hedging fixed-rates bonds (assets)	*1,028*	*1,028*	-	-
Total swaps hedging fixed-rates bonds (assets and liabilities)	792	792	(28)	27
Current portion of non-current debt after swap (excluding capital lease obligations)	3,784	3,784	4	(4)
Other interest rates swaps	(1)	(1)	(1)	1
Currency swaps and forward exchange contracts	13	13	-	-
As of December 31, 2012				
Bonds (non-current portion, before swaps)	(21,346)	(21,545)	97	(97)
Swaps hedging fixed-rates bonds (liabilities)	*(11)*	*(11)*	-	-
Swaps hedging fixed-rates bonds (assets)	*1,626*	*1,626*	-	-
Total swaps hedging fixed-rates bonds (assets and liabilities)	1,615	1,615	(58)	58
Current portion of non-current debt after swap (excluding capital lease obligations)	4,251	4,251	4	(4)
Other interest rates swaps	-	-	2	(2)
Currency swaps and forward exchange contracts	(50)	(50)	-	-
As of December 31, 2011				
Bonds (non-current portion, before swaps)	(21,402)	(22,092)	83	(83)
Swaps hedging fixed-rates bonds (liabilities)	*(146)*	*(146)*	-	-
Swaps hedging fixed-rates bonds (assets)	*1,976*	*1,976*	-	-
Total swaps hedging fixed-rates bonds (assets and liabilities)	1,830	1,830	(49)	49
Current portion of non-current debt after swap (excluding capital lease obligations)	3,488	3,488	3	(3)
Other interest rates swaps	(1)	(1)	3	(3)
Currency swaps and forward exchange contracts	47	47	-	-

The impact of changes in interest rates on the cost of net debt before tax is as follows:

For the year ended December 31, (M€)	2013	2012	2011
Cost of net debt	(606)	(571)	(440)
Interest rate translation of:			
+10 basis points	(11)	(11)	(10)
-10 basis points	11	11	10
+100 basis points	(113)	(106)	(103)
-100 basis points	113	106	103

As a result of the policy for the management of currency exposure previously described, the Group's sensitivity to currency exposure is primarily influenced by the net equity of the subsidiaries whose functional currency is the dollar and, to a lesser extent, the pound sterling and the Norwegian krone.

This sensitivity is reflected in the historical evolution of the currency translation adjustment recorded in the statement of changes in shareholders' equity which, in the course of the last three fiscal years, is essentially related to the fluctuation of dollar and pound sterling and is set forth in the table below:

	Euro/Dollar exchange rates	Euro/Pound sterling exchange rates
As of December 31, 2013	**1.38**	**0.83**
As of December 31, 2012	1.32	0.82
As of December 31, 2011	1.29	0.84

As of December 31, 2013 (M€)	Total	Euro	Dollar	Pound sterling	Other currencies and equity affiliates
Shareholders' equity at historical exchange rate	77,014	46,984	23,599	4,289	2,142
Currency translation adjustment before net investment hedge	(4,385)	-	(2,524)	(931)	(930)
Net investment hedge - open instruments	-	-	-	-	-
Shareholders' equity at exchange rate as of December 31, 2013	72,629	46,984	21,075	3,358	1,212

As of December 31, 2012 (M€)	Total	Euro	Dollar	Pound sterling	Other currencies and equity affiliates
Shareholders' equity at historical exchange rate	72,689	44,968	22,253	4,268	1,200
Currency translation adjustment before net investment hedge	(1,504)	-	(782)	(837)	115
Net investment hedge - open instruments	-	-	-	-	-
Shareholders' equity at exchange rate as of December 31, 2012	71,185	44,968	21,471	3,431	1,315

As of December 31, 2011 (M€)	Total	Euro	Dollar	Pound sterling	Other currencies and equity affiliates
Shareholders' equity at historical exchange rate	67,949	40,763	21,554	4,464	1,168
Currency translation adjustment before net investment hedge	(978)	-	120	(931)	(167)
Net investment hedge - open instruments	(26)	-	(25)	(1)	-
Shareholders' equity at exchange rate as of December 31, 2011	66,945	40,763	21,649	3,532	1,001

As a result of this policy, the impact of currency exchange rate fluctuations on consolidated income, as illustrated in Note 7 to the Consolidated Financial Statements, has not been significant over the last three years despite the considerable fluctuation of the dollar (a gain of €6 million in 2013, a gain of €26 million in 2012 and a gain of €118 million in 2011).

1.9. Stock market risk

The Group holds interests in a number of publicly-traded companies (see Notes 12 and 13 to the Consolidated Financial Statements). The market value of these holdings fluctuates due to various factors, including stock market trends, valuations of the sectors in which the companies operate, and the economic and financial condition of each individual company.

1.10. Liquidity risk

TOTAL S.A. has confirmed lines of credit granted by international banks, which are calculated to allow it to manage its short-term liquidity needs as required.

As of December 31, 2013, these lines of credit amounted to $11,031 million, of which $11,031 million was unused. The agreements for the lines of credit granted to TOTAL S.A. do not contain conditions related to the Company's financial ratios, to its financial ratings from specialized agencies, or to the occurrence of events that could have a material adverse effect on its financial position. As of December 31, 2013, the aggregate amount of the principal confirmed lines of credit granted by international banks to Group companies, including TOTAL S.A., was $11,581 million, of which $11,421 million was unused. The lines of credit granted to Group companies other than TOTAL S.A. are not intended to finance the Group's general needs; they are intended to finance either the general needs of the borrowing subsidiary or a specific project.

The following tables show the maturity of the financial assets and liabilities of the Group as of December 31, 2013, 2012 and 2011 (see Note 20 to the Consolidated Financial Statements).

As of December 31, 2013

(M€) Assets/(Liabilities)	Less than one year	1-2 years	2-3 years	3-4 years	4-5 years	More than 5 years	Total
Non-current financial debt (notional value excluding interests)	-	(3,370)	(3,284)	(3,015)	(3,162)	(11,210)	(24,041)
Current borrowings	(8,116)	-	-	-	-	-	(8,116)
Other current financial liabilities	(276)	-	-	-	-	-	(276)
Current financial assets	536	-	-	-	-	-	536
Assets and liabilities available for sale or exchange	130	-	-	-	-	-	130
Cash and cash equivalents	14,647	-	-	-	-	-	14,647
Net amount before financial expense	**6,921**	**(3,370)**	**(3,284)**	**(3,015)**	**(3,162)**	**(11,210)**	**(17,120)**
Financial expense on non-current financial debt	(729)	(661)	(554)	(508)	(447)	(1,294)	(4,193)
Interest differential on swaps	350	284	100	(24)	(80)	(515)	115
Net amount	6,542	(3,747)	(3,738)	(3,547)	(3,689)	(13,019)	(21,198)

As of December 31, 2012

(M€) Assets/(Liabilities)	Less than one year	1-2 years	2-3 years	3-4 years	4-5 years	More than 5 years	Total
Non-current financial debt (notional value excluding interests)	-	(3,832)	(3,465)	(2,125)	(3,126)	(8,100)	(20,648)
Current borrowings	(11,016)	-	-	-	-	-	(11,016)
Other current financial liabilities	(176)	-	-	-	-	-	(176)
Current financial assets	1,562	-	-	-	-	-	1,562
Assets and liabilities available for sale or exchange	(756)	-	-	-	-	-	(756)
Cash and cash equivalents	15,469	-	-	-	-	-	15,469
Net amount before financial expense	**5,083**	**(3,832)**	**(3,465)**	**(2,125)**	**(3,126)**	**(8,100)**	**(15,565)**
Financial expense on non-current financial debt	(746)	(625)	(519)	(405)	(352)	(1,078)	(3,725)
Interest differential on swaps	371	335	225	106	62	(37)	1,062
Net amount	4,708	(4,122)	(3,760)	(2,424)	(3,416)	(9,215)	(18,228)

As of December 31, 2011

(M€) Assets/(Liabilities)	Less than one year	1-2 years	2-3 years	3-4 years	4-5 years	More than 5 years	Total
Non-current financial debt (notional value excluding interests)	-	(4,492)	(3,630)	(3,614)	(1,519)	(7,326)	(20,581)
Current borrowings	(9,675)	-	-	-	-	-	(9,675)
Other current financial liabilities	(167)	-	-	-	-	-	(167)
Current financial assets	700	-	-	-	-	-	700
Cash and cash equivalents	14,025	-	-	-	-	-	14,025
Net amount before financial expense	**4,883**	**(4,492)**	**(3,630)**	**(3,614)**	**(1,519)**	**(7,326)**	**(15,698)**
Financial expense on non-current financial debt	(785)	(691)	(521)	(417)	(302)	(1,075)	(3,791)
Interest differential on swaps	320	331	221	120	55	44	1,091
Net amount	4,418	(4,852)	(3,930)	(3,911)	(1,766)	(8,357)	(18,398)

In addition, the Group guarantees bank debt and finance lease agreements of certain non-consolidated companies and equity affiliates. A payment would be triggered by failure of the guaranteed party to fulfill its obligation covered by the guarantee, and no assets are held as collateral for these guarantees. Maturity dates and amounts are set forth in Note 23 to the Consolidated Financial Statements ("Guarantees given against borrowings").

The Group also guarantees the current liabilities of certain non-consolidated companies. Performance under these guarantees would be triggered by a financial default of these entities. Maturity dates and amounts are set forth in Note 23 to the Consolidated Financial Statements ("Guarantees of current liabilities").

The following table sets forth financial assets and liabilities related to operating activities as of December 31, 2013, 2012 and 2011 (see Note 28 to the Consolidated Financial Statements).

As of December 31 (M€) Assets/(Liabilities)	2013	2012	2011
Accounts payable	(21,958)	(21,648)	(22,086)
Other operating liabilities	(5,941)	(5,904)	(5,441)
including financial instruments related to commodity contracts	*(615)*	*(456)*	*(548)*
Accounts receivable, net	16,984	19,206	20,049
Other operating receivables	7,191	6,158	7,467
including financial instruments related to commodity contracts	*927*	*681*	*1,017*
Total	(3,724)	(2,188)	(11)

These financial assets and liabilities mainly have a maturity date below one year.

1.11. Credit risk

Credit risk is defined as the risk of the counterparty to a contract failing to perform or pay the amounts due.

The Group is exposed to credit risks in its operating and financing activities. The Group's maximum exposure to credit risk is partially related to financial assets recorded on its balance sheet, including energy derivative instruments that have a positive market value.

The following table presents the Group's maximum credit risk exposure:

As of December 31 (M€) Assets/(Liabilities)	2013	2012	2011
Loans to equity affiliates *(Note 12)*	2,577	2,360	2,246
Loans and advances *(Note 14)*	2,592	2,207	2,055
Hedging instruments of non-current financial debt *(Note 20)*	1,028	1,626	1,976
Accounts receivable *(Note 16)*	16,984	19,206	20,049
Other operating receivables *(Note 16)*	7,191	6,158	7,467
Current financial assets *(Note 20)*	536	1,562	700
Cash and cash equivalents *(Note 27)*	14,647	15,469	14,025
Total	45,555	48,588	48,518

The valuation allowance on loans and advances and on accounts receivable and other operating receivables is detailed respectively in Notes 14 and 16 to the Consolidated Financial Statements.

As part of its credit risk management related to operating and financing activities, the Group has developed margin call contracts with certain counterparties. As of December 31, 2013, the net amount received as part of these margin calls was €801 million (against €1,635 million as of December 31, 2012 and €1,682 million as of December 31, 2011).

Credit risk is managed by the Group's business segments as follows:

Upstream Segment

- **Exploration & Production**

  Risks arising under contracts with government authorities or other oil companies or under long-term supply contracts necessary for the development of projects are evaluated during the project approval process. The long-term aspect of these contracts and the high-quality of the other parties lead to a low level of credit risk.

  Risks related to commercial operations, other than those described above (which are, in practice, directly monitored by subsidiaries), are subject to procedures for establishing and reviewing credit.

Customer receivables are subject to provisions on a case-by-case basis, based on prior history and management's assessment of the facts and circumstances.

- **Gas & Power**

Gas & Power deals with counterparties in the energy, industrial and financial sectors throughout the world. Financial institutions providing credit risk coverage are highly rated international bank and insurance groups.

Potential counterparties are subject to credit assessment and approval before concluding transactions and are thereafter subject to regular review, including re-appraisal and approval of the limits previously granted.

The creditworthiness of counterparties is assessed based on an analysis of quantitative and qualitative data regarding financial standing and business risks, together with the review of any relevant third party and market information, such as data published by rating agencies. On this basis, credit limits are defined for each potential counterparty and, where appropriate, transactions are subject to specific authorizations.

Credit exposure, which is essentially an economic exposure or an expected future physical exposure, is permanently monitored and subject to sensitivity measures.

Credit risk is mitigated by the systematic use of industry standard contractual frameworks that permit netting, enable requiring added security in case of adverse change in the counterparty risk, and allow for termination of the contract upon occurrence of certain events of default.

Refining & Chemicals Segment

- **Refining & Chemicals**

Credit risk is primarily related to commercial receivables. Internal procedures of Refining & Chemicals include rules for the management of credit describing the fundamentals of internal control in this domain. Each division implements procedures for managing and provisioning credit risk that differ based on the size of the subsidiary and the market in which it operates. The principal elements of these procedures are:

- implementation of credit limits with different authorization procedures for possible credit overruns;
- use of insurance policies or specific guarantees (letters of credit);
- regular monitoring and assessment of overdue accounts (aging balance), including collection procedures; and
- provisioning of bad debts on a customer-by-customer basis, according to payment delays and local payment practices (provisions may also be calculated based on statistics).

Counterparties are subject to credit assessment and approval prior to any transaction being concluded. Regular reviews are made for all active counterparties including a re-appraisal and renewing of the granted credit limits. The limits of the counterparties are assessed based on quantitative and qualitative data regarding financial standing, together with the review of any relevant third party and market information, such as that provided by rating agencies and insurance companies.

- **Trading & Shipping**

Trading & Shipping deals with commercial counterparties and financial institutions located throughout the world. Counterparties to physical and derivative transactions are primarily entities involved in the oil and gas industry or in the Trading of energy commodities, or financial institutions. Credit risk coverage is concluded with financial institutions, international banks and insurance groups selected in accordance with strict criteria.

The Trading & Shipping division has a strict policy of internal delegation of authority governing establishment of country and counterparty credit limits and approval of specific transactions. Credit exposures contracted under these limits and approvals are monitored on a daily basis.

Potential counterparties are subject to credit assessment and approval prior to any transaction being concluded and all active counterparties are subject to regular reviews, including re-appraisal and approval of granted limits. The creditworthiness of counterparties is assessed based on an analysis of quantitative and qualitative data regarding financial standing and business risks, together with the review of any relevant third party and market information, such as ratings published by Standard & Poor's, Moody's Investors Service and other agencies.

Contractual arrangements are structured so as to maximize the risk mitigation benefits of netting between transactions wherever possible and additional protective terms providing for the provision of security in the event of financial deterioration and the termination of transactions on the occurrence of defined default events are used to the greatest permitted extent.

Credit risks in excess of approved levels are secured by means of letters of credit and other guarantees, cash deposits and insurance arrangements. In respect of derivative transactions, risks are secured by margin call contracts wherever possible.

Marketing & Services segment

Internal procedures for the Marketing & Services division include rules on credit risk that describe the basis of internal control in this domain, including the separation of authority between commercial and financial operations. Credit policies are defined at the local level, complemented by the implementation of procedures to monitor customer risk (credit Committees at the subsidiary level, the creation of credit limits for Corporate customers, portfolio guarantees, etc.).

Each entity also implements monitoring of its outstanding receivables. Risks related to credit may be mitigated or limited by subscription of credit insurance and/or requiring security or guarantees.

Bad debts are provisioned on a case-by-case basis at a rate determined by management based on an assessment of the risk of credit loss.

2. Industrial and environmental risks

2.1. Types of risks

TOTAL is exposed to risks related to the safety and security of its operations.

TOTAL engages in a broad scope of activities, which include, in particular, drilling, oil and gas production, processing, transportation, refining and petrochemical activities, storage and distribution of petroleum products, specialty chemicals and solar energy. These activities involve a wide range of operational risks, such as explosions, fires, accidents, equipment failures, leakage of toxic products, emissions or discharges into the air, water or soil, and related environmental and health risks. In the transportation area, the type of risk depends not only on the hazardous nature of the products transported, but also on the transportation methods used (mainly maritime, river-maritime, rail, road and pipelines), the volumes involved and the sensitivity of the regions through which the transport passes (quality of infrastructure, population density, environmental considerations). Most of the Group's activities will also eventually require environmental site remediation, closure and decommissioning after production is discontinued.

The following table shows a correlation between TOTAL's operations and the most significant industrial and environmental risks:

Activity/Risk	Fire, explosion	Leakage of toxic products	Accidental pollution	Pollution of soil and subsoil [(a)]	Emissions into the air, water and soil	Consumer health and safety
Drilling	x	x	x	x	x	-
Hydrocarbon production	x	x	x	x	x	-
On-site processing of hydrocarbons	x	x	x	x	x	-
Transport of petroleum products and chemicals	x	x	x	x	x	-
Refining, petrochemicals	x	x	x	x	x	x
Storage of petroleum products	x	x	x	x	x	-
Distribution of petroleum products	x	-	x	x	x	x
Specialty chemicals	x	x	x	x	x	x
Solar energy	x	x	x	x	x	-

(a) Pollution of soil and subsoil resulting from a long period of operations carried out at the site (*i.e.*, environmental liabilities).

The industrial events that could have the most significant impact are primarily:

– a major industrial accident (fire, explosion, leakage of highly toxic products); and

– large-scale accidental pollution or pollution at a particularly sensitive site.

Each of the described risks corresponds to events that could potentially harm human health, cause death, damage property, disrupt business activities or cause environmental damage. The Group's employees, contractors, residents living near the facilities or customers can suffer injuries. Property damage can involve the facilities of the Group as well as the property of third parties. The seriousness of the consequences of these events varies according to the vulnerability of the people, ecosystems and business activities impacted, on the one hand, and the number of people in the impact area and the location of the ecosystems and business activities in relation to TOTAL's facilities or to the trajectory of the products after the event, on the other hand.

Acts of terrorism against the Group's plants and sites, pipelines, transportation and computer systems could also severely disrupt business and operations and could cause harm to people, the environment and property.

Like most industrial groups, TOTAL is impacted by reports of occupational illnesses, particularly those caused by past exposure of the Group's employees to asbestos. Asbestos exposure has been subject to close monitoring at all of the Group's business segments. As of December 31, 2013, the Group estimates that the ultimate cost of all pending or future asbestos-related claims is not likely to have a material impact on the Group's financial position.

Certain segments or activities face specific additional risks.

TOTAL's Upstream segment activities face, notably, risks related to the physical characteristics of oil or gas fields. These risks include eruptions of oil or gas, discovery of hydrocarbon pockets with abnormal pressure, crumbling of well openings, leaks that can harm the environment and explosions or fires. These events, which may cause injury, death or environmental damage, can also damage or destroy oil or gas wells as well as equipment and other property, lead to a disruption of the Group's operations or reduce its production. In addition, since exploration and production activities may take place on sites that are ecologically sensitive (for example, in tropical forests or in a marine environment), each site requires a risk-based approach to avoid or minimize the impact on human health, flora and fauna, the ecosystem and biodiversity. In certain situations where the operator is not a Group entity, the Group may have reduced influence and control over third parties, which may limit its ability to manage and control these risks.

The activities of the Refining & Chemicals and Marketing & Services business segments also entail additional health, safety and environmental risks related to the overall life cycle of the products manufactured, as well as the raw materials used in the manufacturing process, such as catalysts, additives and monomers. These risks can arise from the intrinsic characteristics of the products involved (flammability, toxicity or long-term environmental impacts such as greenhouse gas emissions), their use (including by customers), emissions and discharges resulting from their manufacturing process (such as greenhouse gas emissions), and from material and waste disposal (recycling, regeneration or other process, or waste elimination).

Contracts signed by the Group's entities may provide for indemnification obligations either by TOTAL in favor of the contractor or third parties or by the contractor or third parties in favor of TOTAL if, for example, an event occurs leading to death, personal injury or property or environmental damage.

With respect to joint ventures in which an entity of the Group has an interest and the assets of which are operated by such Group entity under an operating agreement between the joint venture and such entity, contractual terms generally provide that the operator assumes full liability for damages caused by its gross negligence or willful misconduct.

With respect to joint ventures in which an entity of the Group has an interest but the assets of which are operated by a third party, contractual terms generally provide that the operator assumes full liability for damages caused by its gross negligence or willful misconduct.

In the absence of the operator's gross negligence or willful misconduct, other liabilities are generally borne by the joint venture and the cost thereof is assumed by the partners of the joint venture in proportion to their respective ownership interests.

With respect to third-party providers of goods and services, the amount and nature of the liability assumed by the third party depends on the context and may be limited by contract. With respect to their customers, the Group's entities ensure that their products meet applicable specifications and abide by all applicable consumer protection laws. Failure to do so could lead to personal injury, environmental harm and loss of customers, which could negatively impact the Group's results of operations, financial position and reputation.

Crisis management systems are necessary to respond effectively to emergencies, avoid potential disruptions in TOTAL's business and operations and minimize impacts on third parties and the environment.

TOTAL has crisis management plans in place to deal with emergencies. However, these plans cannot exclude the risk that the Group's business and operations may be severely disrupted in a crisis situation or ensure the absence of impacts on third parties or the environment. TOTAL also has implemented business continuity plans in order to continue or resume operations following a shutdown or incident. An inability to restore or replace critical capacity in a timely manner could prolong the impact of any disruption and could have a material adverse effect on the Group's business and operations. For more information on the Group's crisis management systems, see point 2.2.3 below.

TOTAL is subject to stringent environmental, health and safety laws in numerous countries and may incur material costs to comply with these laws and regulations.

TOTAL's workforce and the public are exposed to risks inherent to the Group's operations that potentially could lead to loss of life, injuries, property damage or environmental damage and could result in regulatory action and legal liability against the entities of the Group and its officers as well as damage to the Group's reputation.

TOTAL incurs, and will continue to incur, substantial expenditures to comply with increasingly complex laws and regulations aimed at protecting worker health and safety and natural habitats.

These expenditures include:

- costs incurred to prevent, control, eliminate or reduce certain types of air and water emissions, including those costs incurred in connection with measures taken to address climate change;
- remedial measures related to environmental contamination or accidents at various sites, including those owned by third parties;
- indemnification of individuals or entities claiming damages caused by accidents or by the Group's activities;
- increased production costs and costs related to changes in product specifications; and
- costs related to the decommissioning of drilling platforms and other facilities.

Such expenditures incurred could have a material effect on the results of operations of the Group and its financial position, if the Group's reserves prove inadequate.

Furthermore, in countries where the Group operates or plans to operate, the introduction of new laws and regulations, stricter enforcement or news interpretations of existing laws and regulations or the imposition of tougher license requirements may also cause the Group's entities to incur higher costs resulting from actions taken to comply with such laws and regulations, including:

- modifying operations;
- installing pollution control equipment;
- implementing additional safety measures; and
- performing site clean-ups.

As a further result of, notably, the introduction of any new laws and regulations, the Group could also be compelled to curtail, modify or cease certain operations or implement temporary shutdowns of facilities, which could diminish the Group's productivity and have a material adverse impact on its results of operations.

All TOTAL entities monitor legal and regulatory developments in order to remain in compliance with local and international rules and standards for the assessment and management of industrial and environmental risks. With regard to the permanent shutdown of an activity, the Group's environmental contingencies and asset retirement obligations are addressed in the "Asset retirement obligation" and "Provisions for environmental contingencies" sections of the Group's Consolidated Balance Sheet (see Note 19 to the Consolidated Financial Statements, Chapter 10, point 7.). Future expenditures related to asset retirement obligations are accounted for in accordance with the accounting principles described in Note 1Q to the Consolidated Financial Statements (Chapter 10, point 7.).

Laws and regulations related to climate change and its physical effects may adversely affect the Group's business.

Growing public concern in a number of countries over greenhouse gas emissions and climate change, as well as a multiplication of stricter regulations in this area, could adversely affect the Group's businesses and product sales, increase its operating costs and reduce its profitability.

The regulations concerning the market for CO_2 emission allowances in Europe, EU-ETS (European Union Emissions Trading System), entered a third phase on January 1, 2013. This phase marks the end of the overall free allocation of emission allowances: certain emissions, such as those related to electricity production, no longer benefit from free allowances, while for others, free allowances have been significantly reduced. Free allocations are now established based on the emission level of the top-performing plants within the same sector ("top 10 benchmark") and lower-performing plants must purchase, at market price, the necessary allowances to cover their emissions over and above these free allocations. Moreover, the Group's plants will need to indirectly bear the cost of allowances for all electricity consumed (including electricity generated internally at its own facilities).

Given these new rules and the European Commission's decision to apply a "cross-sectoral correction factor" (CSCF) that reduces the total amount of free allocations for all sectors combined by an average of 11.6% over phase 3 (2013-2020), the Group estimates that approximately 30% of its emissions subject to the EU-ETS will not be covered by free allowances during the 2013-2020 period. The Group is exploring possible avenues of appeal against the method of calculating this correction factor.

The financial risk related to the foreseeable purchase of these allowances on the market should remain low for the Group if prices for emission allowances remain close to their current level (€5/t CO_2). If significant changes are made to the regulation during phase 3, such as the authorization given to the European Commission to intervene at its own discretion in the allowance auction calendar (backloading), prices for CO_2 allowances could increase substantially, which could have a significant adverse impact on the results of the Group's refining operations. Finally, the revision in 2014 of the list of sectors exposed to carbon leakage represents another regulatory uncertainty that, if it were to affect the refining sector in Europe, could also have a significant adverse impact on the results of the Group's refining operations.

In addition, more of TOTAL's future production could come from unconventional sources in order to help meet the world's growing demand for energy. Since energy intensity of oil and gas production from unconventional sources can be higher than that of production from conventional sources, the CO_2 emissions produced by the Group's activities may increase. Therefore, TOTAL may need to incur additional costs related to certain projects.

Finally, TOTAL's businesses operate in varied locales where the potential physical impacts of climate change, including changes in weather patterns, are highly uncertain and may adversely impact the results of the Group's operations.

2.2. Management and monitoring of industrial and environmental risks

2.2.1. TOTAL's policies regarding health, safety and the environment

TOTAL has developed a "Health Safety Environment Quality Charter" (see Chapter 7, point 2.) that sets out the basic principles applicable within the Group regarding the protection of people, property and the environment. This charter is rolled out at several levels within the Group by means of its management systems.

Along these lines, TOTAL has developed efficient organizations as well as safety, environmental and quality management systems, which it makes every effort to have certified or assessed (*e.g.*, standards such as the International Safety Rating System, ISO 14001 and ISO 9001).

In most countries, TOTAL's operations are subject to laws and regulations concerning environmental protection, health and safety, to which TOTAL ensures compliance. The main laws and regulations include:

1) In Europe: IPPC and large combustion plants directives (recast by the IED directive), SEVESO directive, pressure equipment directive, water framework directive, waste directive, ETS directive (CO_2 allowances), Fuel Directive, REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) and CLP (Classification, Labelling and Packaging) regulations.

2) In France: regulations on natural and technological risks.

3) In the United States: OSHA/PSM (Occupational Safety and Health Administration/Process safety management of highly hazardous materials), Clean Air Act, Clean Water Act and the Comprehensive Environmental Response, Compensation, and Liablity Act (also known as CERCLA or Superfund).

2.2.2. Assessment

As part of its policy, TOTAL assesses risks and impacts in the areas of safety (particularly process safety), the environment and the protection of workers and local residents:

– prior to approving new projects, investments, acquisitions and disposals;

– periodically during operations (safety studies, environmental impact studies, health impact studies and Technological Risk Prevention Plan – PPRT in France);

– prior to releasing new substances on the market (toxicological and ecotoxicological studies and life cycle analyses); and

– based on the regulatory requirements of the countries where these activities are carried out and generally accepted professional practices.

In countries where prior administrative authorization and supervision is required, projects are not undertaken without the authorization of the relevant authorities based on the studies provided to the authorities.

In particular, TOTAL has developed a common methodology for analyzing technological risks that is being gradually applied to all activities carried out by the companies of the Group (see Chapter 7, point 2.2.3.).

2.2.3. Management

TOTAL develops risk management measures based on risk and impact assessments. These measures involve facility and structure design, the reinforcement of safety devices and remedies of environmental degradations.

In addition to developing organizations and management systems as described above, TOTAL strives to minimize industrial and environmental risks inherent in its operations by conducting thorough inspections and audits, training personnel and raising awareness among all those involved.

In addition, performance indicators (particularly in the areas of HSE) and risk monitoring have been put in place, objectives have been set and action plans have been implemented to achieve these objectives.

Although the emphasis is on preventing risks, TOTAL takes regular steps to prepare for crisis management based on the risk scenarios identified.

In particular, TOTAL has developed emergency plans and procedures to respond to an oil spill or leak. These plans and procedures are specific to each TOTAL affiliate and adapted to its organization, activities and environment and are consistent with the Group's plan. They are reviewed regularly and tested through exercises (see Chapter 7, point 2.).

At the Group level, TOTAL has set up the PARAPOL (Plan to Mobilize Resources Against Pollution) alert scheme to facilitate crisis management and provide assistance without geographical restriction by mobilizing both internal and external resources in the event of pollution of marine, coastal or inland waters. The PARAPOL procedure is made available to subsidiaries of the Group and its main goal is to facilitate access to internal experts and physical response resources.

Furthermore, the Company and its subsidiaries are currently members of certain oil spill cooperatives that are able to provide expertise, resources and equipment in all geographic areas where the Group has operations, including, in particular, Oil Spill Response Limited and CEDRE (Center for Documentation, Research and Experimentation on Accidental Water Pollution).

Following the blow-out on the Macondo well in the Gulf of Mexico in 2010 (in which the Group was not involved), TOTAL created three task forces in order to analyze risks and issue recommendations.

In Exploration & Production, Task Force 1 reviewed the safety aspects of deep offshore drilling operations (well architecture, design of blow-out preventers, training of personnel based on lessons learned from serious accidents that have occurred recently in the industry). Its efforts have led to the implementation of even more stringent controls and audits on drilling operations.

Task Force 2, in coordination with the Global Industry Response Group (GIRG) created by the OGP (International Association of Oil and Gas Producers), is developing deep offshore oil capture systems and planning related containment operations in case of a pollution event in deep waters. Several of these systems were positioned in various parts of the world in 2013 and one of them was tested by TOTAL in November 2013 during a large-scale exercise in Angola.

Task Force 3 addressed plans to fight accidental spills in order to strengthen the Group's ability to respond to major accidental pollution, such as a blow-out or a total loss of containment from an FPSO (Floating Production, Storage and Offloading facility). This initiative has led, in particular, to a sharp increase in the volume of dispersants available within the Group.

The task forces finalized most of their work in 2012 and the Group has continued deploying solutions to minimize such risks. Detailed information on TOTAL's initiatives in the fields of safety and protection of the environment is provided in Chapter 7.

The Group believes that it is impossible to guarantee that the contingencies or liabilities related to the above mentioned concerns will not have a material impact on its business, assets and liabilities, consolidated financial situation, cash flow or income in the future.

To manage the operational risks to which the Group is exposed, TOTAL maintains worldwide third-party liability insurance coverage for all its subsidiaries. TOTAL also maintains insurance to protect against the risk of damage to Group property and/or business interruption at its main refining and petrochemical sites. TOTAL's insurance and risk management policies are described in point 5. of this Chapter ("Insurance and risk management").

3. Other risks

3.1. Economic environment

The operating results and future rate of growth of the Group are exposed to the effects of changing commodity prices.

Prices for oil and natural gas historically have fluctuated widely due to many factors over which TOTAL has no control. These factors include:

- global and regional supply and demand;
- global and regional economic and political developments in resource-producing regions, particularly in the Middle East, Africa and South America;
- the ability of the Organization of Petroleum Exporting Countries (OPEC) and other producing nations to influence global production levels and prices;
- prices of unconventional energies as well as evolving approaches for developing oil sands, which may affect the Group's realized prices, notably under its long-term gas sales contracts and asset valuations, notably in North America;
- cost and availability of new technology;
- governmental regulations and actions;
- global economic and financial market conditions;
- war or other conflicts;
- changes in demographics, including population growth rates and consumer preferences; and
- adverse weather conditions (such as hurricanes) that can disrupt supplies or interrupt operations of the Group's facilities.

Substantial or extended declines in oil and natural gas prices would adversely affect TOTAL's results of operations by reducing its profits. Sensitivity to market environment are described above and discussed in greater detail in point 1.1. of this Chapter 4.

In addition to the adverse effect on revenues, margins and profitability from any fall in oil and natural gas prices, a prolonged period of low prices or other indicators could lead to a review of the Group's properties and oil and natural gas reserves. Such review would reflect the Company's view based on estimates, assumptions and judgments and could result in a reduction in the Group's reported reserves and/or a charge for impairment that could have a significant effect on the Group's results in the period in which it occurs. Lower oil and natural gas prices over prolonged periods may also reduce the economic viability of projects planned or in development, negatively impact the asset sale program of the Group and reduce liquidity, thereby decreasing the Group's ability to finance capital expenditures and/or causing it to cancel or postpone investment projects. If TOTAL is unable to follow through with investment projects, the Group's opportunities for future revenue and profitability growth would be reduced, which could materially impact the Group's financial condition.

However, in a high oil and gas price environment, the Group can experience significant increases in cost and fiscal take, and, under some production-sharing contracts, the Group's entitlement to reserves could be reduced. Higher prices can also reduce demand for the Group's products.

The Group's earnings from its Refining & Chemicals and Marketing & Services segments are primarily dependent upon the supply and demand for refined products and the associated margins on refined product sales, with the impact of changes in oil and gas prices on earnings on these segments being dependent upon the speed at which the prices of refined products adjust to reflect movements in oil and gas prices.

3.2. Risks related to oil and gas exploration and production

The Group's long-term profitability depends on cost effective discovery, acquisition and development of new reserves; if the Group is unsuccessful, its results of operations and financial condition would be materially and adversely affected.

A significant portion of the Group's revenues and the majority of its operating income are derived from the sale of oil and gas that the Group extracts from underground reserves developed as part of its Upstream business. The development of oil and gas fields, the construction of facilities and the drilling of production or injection wells is capital intensive, requires advanced technology and moreover, due to constantly changing market conditions and difficult environmental challenges, cost projections are uncertain. In order for this Upstream business to continue to be profitable, the Group needs to replace its reserves with new proved reserves. Furthermore, the Group needs to accomplish such replacement in a manner that allows subsequent production to be economically viable. However, TOTAL's ability to discover or acquire and develop new reserves successfully is uncertain and can be negatively affected by a number of factors, including:

- the geological nature of oil and gas fields, notably unexpected drilling conditions including pressure or irregularities in geological formations;
- the risk of dry holes or failure to find expected commercial quantities of hydrocarbons;
- equipment failures, fires, blow-outs or accidents;
- the Group's inability to develop or deploy new technologies that permit access to previously inaccessible fields;
- the Group's inability to anticipate market changes in a timely manner;
- adverse weather conditions;
- compliance with both anticipated and unanticipated governmental requirements, including U.S. and EU regulations that may give a competitive advantage to companies not subject to such regulations;
- shortages or delays in the availability or delivery of appropriate equipment;
- industrial action;
- competition from publicly held and state-run oil and gas companies for the acquisition and development of assets and licenses, as well as from other major international oil companies (refer to point 3.10. "Risks related to Competition");
- increased taxes and royalties, including retroactive claims; and
- problems with legal title.

Any of these factors could lead to cost overruns and impair the Group's ability to make discoveries and acquisitions or complete a development project, or to make production economical. It is impossible to guarantee that new reserves of oil and gas will be discovered in sufficient quantities to replace the Group's reserves currently being developed, produced and marketed. Furthermore, some of these factors may also affect the Group's projects and facilities further down the oil and gas chain. If TOTAL fails to develop new reserves cost-effectively on an ongoing basis, the Group's results of operations, including profits, and the Group's financial condition, would be materially and adversely affected.

The Group's oil and gas reserves data are only estimates, and subsequent downward adjustments are possible. If actual production from such reserves is lower than current estimates indicate, the Group's results of operations and financial condition would be negatively impacted.

The proved reserves figures of the Group are estimates reflecting applicable reporting regulations. Proved reserves are those reserves which, by analysis of geosciences and engineering data, can be estimated with reasonable certainty to be economically producible – from a given date forward, from known reservoirs and under existing economic conditions, operating methods and government regulations – prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain, regardless of whether deterministic or probabilistic methods are used for the estimation. Reserves are estimated by teams of qualified, experienced and trained geoscientists, petroleum engineers and project engineers, who rigorously review and analyze in detail all available geosciences and engineering data (*e.g.*, seismic, electrical logs, cores, fluids, pressures, flow rates, facilities parameters). This process involves making subjective judgments, including with respect to the estimate of hydrocarbons initially in place, initial production rates and recovery efficiency, based on available geological, technical and economic data. Consequently, estimates of reserves are not exact measurements and are subject to revision.

In addition, they may be negatively impacted by a variety of factors that are beyond the Group's control and that could cause such estimates to be adjusted downward in the future, or cause the Group's actual production to be lower than its currently reported proved reserves indicate. The main such factors include:

– a decline in the price of oil or gas, making reserves no longer economically viable to exploit and therefore not classifiable as proved;

– an increase in the price of oil or gas, which may reduce the reserves to which the Group are entitled under production sharing and risked service contracts and other contractual terms;

– changes in tax rules and other government regulations that make reserves no longer economically viable to exploit; and

– the actual production performance of the Group's reservoirs.

The Group's reserves estimates may therefore require substantial downward revisions to the extent its subjective judgments prove not to have been conservative enough based on the available geosciences and engineering data, or the Group's assumptions regarding factors or variables that are beyond its control prove to be incorrect over time. Any downward adjustment would indicate lower future production amounts, which could adversely affect the Group's results of operations, including profits as well as its financial condition.

3.3. Major projects and production growth

The Group's production growth depends on the delivery of its major development projects.

The Group's targeted production growth relies heavily on the successful execution of its major development projects, which are complex and capital-intensive. These major projects are subject to a number of challenges, including:

– negotiations with partners, governments, suppliers, customers and others;

– cost overruns and delays related to the availability of skilled labor or delays in manufacturing and delivery of critical equipment, or shortages in the availability of such equipment;

– unforeseen technical difficulties that could delay project startup or cause unscheduled project downtime;

– the actual performance of the reservoir and natural field decline; and

– timely issuance or renewal of permits and licenses by government agencies.

Poor delivery of any major project that underpins production or production growth could adversely affect the Group's financial performance. In addition, many of TOTAL's projects under developments are larger and more complex than past major projects, which increases the potential execution risk.

3.4. Equity affiliates

Many of the Group's projects are conducted by equity affiliates. This may reduce the degree of control, as well as the ability of the Group to identify and manage risks.

A significant and growing number of the Group's projects are conducted by equity affiliates. In cases where a company in which the Group holds an interest is not the operator, it may have limited influence over, and control of, the behavior, performance and costs of the partnership, its ability to manage risks may be limited and it may, nevertheless, be pursued by regulators or claimants in the event of an incident. Additionally, the partners of the Group may not be able to meet their financial or other obligations to the projects, which may threaten the viability of a given project, and they may not have the financial capacity to fully indemnify the Group in the event of an incident.

3.5. Risks related to economic or political factors

TOTAL has significant production and reserves located in politically, economically and socially unstable areas, where the likelihood of material disruption of the Group's operations is relatively high.

A significant portion of TOTAL's oil and gas production and reserves is located in countries outside of the Organisation for Economic Co-operation and Development (OECD). In recent years, a number of these countries have experienced varying degrees of one or more of the following: economic instability, political volatility, civil war, violent conflict, social unrest and actions of terrorist groups. Any of these conditions alone or in combination could disrupt the Group's operations in any of these regions, causing substantial declines in production. In addition, uncertainties surrounding enforcement of contractual rights in these regions may adversely impact the Group's results. In Africa, which represented 29% of the Group's 2013 combined liquids and gas production, certain of the countries in which the Group has production have recently suffered from some of these conditions, including Nigeria, which has been the main contributing country to the Group's production of hydrocarbons since 2012, and Libya. The Middle East, which represented 23% of the Group's 2013 combined liquids and gas production, has recently suffered increased political volatility in connection with violent conflict and social unrest, including Syria, where European Union (EU) and U.S. economic sanctions have prohibited TOTAL from producing oil and gas since 2011, and Yemen. In South America, which represented 7% of the Group's 2013 combined liquids and gas production, certain of the countries in which TOTAL has production have recently suffered from some of the above-mentioned conditions, including Argentina and Venezuela. Furthermore, in addition to current production, TOTAL is also exploring for and developing new reserves in other regions of the world that are historically characterized by political, social and economic instability, such as the Caspian Sea region where TOTAL has large projects currently underway. The occurrence and magnitude of incidents related to economic, social and political instability are unpredictable. It is possible that they could have a material adverse impact on the Group's production and operations in the future and/or cause certain investors to reduce their holdings of TOTAL's securities.

TOTAL, like other major international energy companies, has a geographically diverse portfolio of reserves and operational sites, which allows it to conduct its business and financial affairs so as to reduce its exposure to political and economic risks. However, there can be no assurance that such events will not have a material adverse impact on the Group.

The Group's operations throughout emerging countries are subject to intervention by the governments of these countries, which could have an adverse effect on its results of operations.

TOTAL has significant exploration and production activities, and in some cases refining, marketing or chemicals operations, in developing countries whose governmental and regulatory framework is subject to unexpected change and where the enforcement of contractual rights is uncertain. In addition, the Group's exploration and production activity in such countries is often done in conjunction with state-owned entities, for example as part of a joint venture, where the state has a significant degree of control. In recent years, in various regions globally, TOTAL has seen governments and state-owned enterprises imposing more stringent conditions on companies pursuing exploration and production activities in their respective countries, increasing the costs and uncertainties of the Group's business operations, which is a trend TOTAL expects to continue.

Potential increasing intervention by governments in such countries can take a wide variety of forms, including:

– the award or denial of exploration and production interests;
– the imposition of specific drilling obligations;
– price and/or production quota controls and export limits;
– nationalization or expropriation of assets;
– unilateral cancellation or modification of license or contract rights;
– increases in taxes and royalties, including retroactive claims;
– the renegotiation of contracts;
– payment delays; and
– currency exchange restrictions or currency devaluation.

Imposition of any of these factors by a host government in a developing country where TOTAL has substantial operations, including exploration, could cause the Group to incur material costs or cause the Group's production or value of the Group's assets to decrease, potentially having a material adverse effect on its results of operations, including profits.

For example, the Nigerian government has been contemplating new legislation to govern the petroleum industry which, if passed into law, could have an impact on the existing and future activities of the Group in that country through increased taxes and/or costs of operation and could adversely affect financial returns from projects in that country.

3.6. Ethical misconduct and non compliance risks

Ethical misconduct or breaches of applicable laws by the Group's employees could expose TOTAL to criminal and civil penalties and be damaging to TOTAL's reputation and shareholder value.

The Code of Conduct of the Group, which applies to all of its employees, defines the Group's commitment to integrity, compliance with all applicable legal requirements, high ethical standards and the behaviors and actions the Group expects of the businesses and people of the Group wherever it operates. Ethical misconduct or non-compliance with applicable laws and regulations, including non-compliance with anti-bribery and anticorruption laws, by TOTAL, its partners, agents or others that act on the Group's behalf, could expose TOTAL and its employees to criminal and civil penalties and could be damaging to TOTAL's reputation and shareholder value. In addition, ethical misconduct or non-compliance with applicable law may lead the competent authorities to impose other measures, such as the appointment of an independent monitor in charge of reviewing the Group's compliance and internal control procedures and, if need be, recommending improvements of such procedures. Regarding this point, refer to point 4. in Chapter 4 Legal and arbitration proceedings – Iran for an overview of the settlements between TOTAL, the SEC and the Department of Justice (DoJ) providing for the appointment of an independent monitor, who was appointed in late 2013.

The Group has been deploying ethics and compliance programs since 2009, as a priority of the General Management. Refer to point 1.10.1. in Chapter 5 of this Registration Document for more details.

3.7. Legal aspects of the Group's activities

3.7.1. Legal aspects of the Upstream segment's activities

TOTAL's Upstream segment conducts activities in various countries which are therefore subject to a broad range of regulations. These cover virtually all aspects of exploration and production operations, including leasehold rights, production rates, royalties, environmental protection, exports, taxes and foreign exchange rates. The terms of the concessions, licenses, permits and contracts governing the Group's ownership of oil and gas interests vary from country to country. These concessions, licenses, permits and contracts are generally granted by or entered into with a government entity or a state-owned company and are sometimes entered into with private owners. These arrangements usually take the form of concessions or production sharing contracts.

In the framework of oil concession agreements, the oil company owns the assets and the facilities and is entitled to the entire production.

In exchange, the operating risks, costs and investments are the oil company's responsibility and it agrees to remit to the relevant State, usually the owner of the subsoil resources, a production-based royalty, income tax, and possibly other taxes that may apply under local tax legislation.

The production sharing contract (PSC) involves a more complex legal framework than the concession agreement: it defines the terms and conditions of production sharing and sets the rules governing the cooperation between the Company or consortium in possession of the license and the host State, which is generally represented by a state-owned company. The latter can thus be involved in operating decisions, cost accounting and production allocation.

The consortium agrees to undertake and finance all exploration, development and production activities at its own risk. In exchange, it is entitled to a portion of the production, known as "cost oil", the sale of which should cover all of these expenses (investments and operating costs). The balance of production, known as "profit oil", is then shared in varying proportions, between the Company or consortium, on the one hand, and with the State or the state-owned company, on the other hand.

In some instances, concession agreements and PSCs coexist, sometimes in the same country. Even though there are other contractual models, TOTAL's license portfolio is comprised mainly of concession agreements.

In every country, the authorities of the host State, often assisted by international accounting firms, perform joint venture and PSC cost audits and ensure the observance of contractual obligations.

In some countries, TOTAL has also signed contracts called "risked service contracts", which are similar to production sharing contracts. However, the profit oil is replaced by risked monetary remuneration, agreed by contract, which depends notably on the field performance. For example, the remuneration under the Halfaya Iraqi contract is based on an amount calculated per barrel produced.

Oil and gas exploration and production activities are subject to authorization granted by public authorities (licenses), which are granted for specific and limited periods of time and include an obligation to return a large portion, or the entire portion in case of failure, of the area covered by the license at the end of the exploration period.

TOTAL pays taxes on income generated from its oil and gas production and sales activities under its concessions, production sharing contracts and risked service contracts, as provided for by local regulations. In addition, depending on the country, TOTAL's production and sales activities may be subject to a number of other taxes, fees and withholdings, including special petroleum taxes and fees. The taxes imposed on oil and gas production and sales activities may be substantially higher than those imposed on other industrial or commercial businesses.

The legal framework of TOTAL's exploration and production activities, established through concessions, licenses, permits and contracts granted by or entered into with a government entity, a state-owned company or, sometimes, private owners, is subject to certain risks that, in certain cases, can reduce or challenge the protections offered by this legal framework.

3.7.2. Legal aspects of the Group's other activities

The activities of the Group's Refining & Chemicals and Marketing & Services are also subject to a wide range of regulations.

In European countries and in the United States, sites and products are subject to environmental (water, air, soil, noise, protection of biodiversity, waste management, impact studies, etc.), health (on-the-job safety, chemical product risks) and safety (safety of personnel and residents, major risk facilities) regulations. Product quality and consumer protection are also subject to regulations. Within the European Union, EU regulations must be transposed into Member States' national laws or directly enforced. In such Member States, EU legislation and regulations may be in addition to national and local government regulations. In addition, in all Member States of the European Union, industrial facilities operate pursuant to licenses issued by competent local authorities that are based on national laws and EU regulations. It is the same in the United States, where federal rules are in addition to those of the various states.

In other countries where the Group operates, legislation is often inspired by EU and U.S. regulations. These countries may more fully develop certain aspects of regulation in particular fields, for example those relating to protecting water, nature and health.

Irrespective of the particular country in which the Group operates, TOTAL has developed standards based on best practices existing in countries with strong regulations and progressively upgrades policies with respect to these standards.

In addition, depending on the country where the Group operates, its other activities are subject to specific sector requirements that impose constraints with respect to, for example, strategic oil reserves holding requirements or and shipping capacities owned or in chartered.

3.7.3. Competition law

Competition laws apply to the Group's companies in the vast majority of countries in which it does business. Violations of competition laws carry fines and expose the Group and its employees to criminal sanctions and civil suits. Furthermore, it is now common for persons or corporations allegedly injured by violations of competition laws to sue for damages.

Some of the Group's business segments have already been implementing competition law conformity plans for a long time. In 2012, a Group policy for compliance with competition law and prevention of violations in this area (refer to Chapter 5, point 1.10.1 for more details) was adopted. Its deployment is based on a dedicated organization, the involvement of hierarchies and staff, and a warning process.

3.8. Critical IT system services and information security

Disruption of the Group's critical IT services or breaches of information security could adversely affect its operations.

The businesses of the Group depend heavily on the reliability and security of its information technology ("IT") systems. If the integrity of the IT systems were compromised due to, for example, technical failure or cyber attack, the business operations and assets of the Group could sustain serious damage, material intellectual property could be divulged and, in some cases, personal injury, environmental harm and regulatory violations could occur, potentially having a material adverse effect on the Group's results of operations, including profits.

The Information Technology Department has developed and distributed governance and security rules that describe the recommended infrastructure, organization and procedures to maintain information systems that are appropriate to the organization's needs and to limit information security risks. These rules are implemented across TOTAL under the responsibility of the various business segments.

3.9. Countries targeted by economic sanctions

TOTAL has activities in certain countries that are targeted by economic sanctions under relevant U.S. and EU laws, and if the Group's activities are not conducted in accordance with the relevant conditions, TOTAL could be sanctioned or otherwise penalized.

The United States has adopted various laws and regulations designed to restrict trade with Cuba, Iran, Sudan and Syria, and the U.S. Department of State has identified these countries as state sponsors of terrorism. The European Union ("EU") has similar restrictions with respect to Iran and Syria. A violation of these laws or regulations could result in criminal and material financial penalties, including being prohibited from transacting in U.S. dollars. The Group currently has limited marketing and trading activities in Cuba and a limited presence in Iran and Syria (for more information, see point 3.9.2. below). Since the independence of the Republic of South Sudan on July 9, 2011, TOTAL is no longer present in Sudan.

3.9.1. U.S. and European restrictions

With respect to Iran, the United States has adopted a number of measures since 1996 that provide for the possible imposition of sanctions against non-U.S. companies engaged in certain activities in and with Iran, including in Iran's energy sector. The United States first adopted legislation in 1996 authorizing sanctions against non-U.S. companies doing business in Iran and Libya (the Iran and Libya Sanctions Act, referred to as "ILSA"). In 2006, ILSA was amended to concern only business in Iran (then renamed the Iran Sanctions Act, referred to as "ISA"). Pursuant to ISA, which as described below has since been amended and expanded, the President of the United States is authorized to initiate an investigation into the activities of non-U.S. companies in Iran's energy sector and to consider the possible imposition of sanctions against persons found, amongst other activities, to have knowingly made investments of $20 million or more in any 12-month period in the petroleum sector in Iran. In May 1998, the U.S. government waived the application of ISA sanctions for TOTAL's investment in the South Pars gas field. This waiver, which has not been modified since it was granted, does not address any of TOTAL's other activities in Iran. In each of the years between the passage of ILSA and 2007, TOTAL made investments in Iran in excess of $20 million (excluding the investments made as part of the development of South Pars). These investments will not be subject to investigation by the U.S. authorities due to the application of the Special Rule granted on September 30, 2010, as further described below. Since 2008, TOTAL's position has consisted essentially in being reimbursed for its past investments as part of buyback contracts signed between 1995 and 1999 with respect to permits on which the Group is no longer the operator. Since 2011, TOTAL has had no production in Iran.

ISA was amended in July 2010 by the Comprehensive Iran Sanctions, Accountability and Divestment Act of 2010 ("CISADA"), which expanded both the list of activities with Iran that could lead to sanctions and the list of sanctions available. In particular, CISADA authorized sanctions for knowingly providing refined petroleum products above certain monetary thresholds to Iran and for providing goods, services, technology, information or support that could directly and significantly either facilitate Iran's domestic production of refined petroleum products or contribute to Iran's ability to import refined petroleum products. TOTAL had already discontinued potentially sanctionable sales of refined petroleum products to Iran prior to CISADA's enactment. On September 30, 2010, the U.S. State Department announced that the U.S. government, pursuant to the "Special Rule" provision of ISA added by CISADA that allows it to avoid making a determination of sanctionability under ISA with respect to any party that provides certain assurances, would not make such a determination with respect to TOTAL. The U.S. State Department further indicated at that time that, as long as TOTAL acts in accordance with its commitments, TOTAL will not be regarded as a company of concern for its past Iran-related activities.

Since the applicability of the "Special Rule" to TOTAL was announced by the U.S. State Department, the United States has imposed a number of additional measures targeting activities in Iran. On November 21, 2011, President Obama issued Executive Order 13590, which authorized sanctions for knowingly, on or after November 21, 2011, selling, leasing, or providing to Iran goods, services, technology or support above certain monetary thresholds that could directly and significantly contribute to the maintenance or expansion of Iran's ability to develop petroleum resources located in Iran, or domestic production of petrochemical products. TOTAL does not conduct activities in Iran that it believes would be sanctionable under Executive Order 13590. In any event, there is no provision in Executive Order 13590 that modifies the aforementioned "Special Rule", and the U.S. State Department issued guidance that completion of existing contracts is not sanctionable under Executive Order 13590.

On July 30, 2012, President Obama issued Executive Order 13622, which authorized sanctions for, amongst other activities, (i) knowingly, on or after July 30, 2012, engaging in a significant transaction for the purchase or acquisition of petroleum, petroleum products or petrochemical products from Iran, or (ii) materially assisting, sponsoring or providing financial, material, or technological support for, or goods or services in support of, the National Iranian Oil Company, the Naftiran Intertrade Company ("NICO"), or the Central Bank of Iran. There is no provision in Executive Order 13622 that modifies the aforementioned "Special Rule". In addition, Executive Order 13622 contains an exception for the Shah Deniz gas field pipeline project, in which TOTAL (10%) and NICO (10%) participate, to supply natural gas from the Shah Deniz gas field in Azerbaijan to Europe and Turkey. This Executive Order was amended and expanded by Executive Order 13645 (discussed in further detail below), in order to capture as potentially sanctionable conduct a wider range of petroleum-related activities. TOTAL does not conduct activities that it believes would be sanctionable under Executive Order 13622 as amended by Executive Order 13645.

On August 10, 2012, President Obama signed into law the Iran Threat Reduction and Syria Human Rights Act of 2012 ("ITRA"), which, amongst other things, amended ISA and CISADA. ITRA, like CISADA before it, expanded both the list of activities with Iran that could lead to sanctions and the list of sanctions available. Amongst other things, ITRA authorized sanctions for (i) the provision to Iran of goods, services, technology, information or support above a certain market value that could directly and significantly facilitate the maintenance or expansion of Iran's domestic production of refined petroleum products, including any direct and significant assistance with the construction, modernization, or repair of petroleum refineries or infrastructure directly associated with petroleum refineries, (ii) participation in a joint venture established on or after January 1, 2002 with respect to the development of petroleum resources outside of Iran where either the Government of Iran is a substantial partner or investor or where the joint venture could enhance Iran's ability to develop petroleum resources in Iran, and (iii) owning, operating, controlling or insuring a vessel used to transport crude oil from Iran to another country. ITRA also contains an exception for the Shah Deniz gas field project. TOTAL does not conduct activities that it believes would be sanctionable under ITRA.

ITRA also added Section 13(r) to the Securities Exchange Act of 1934, as amended ("Exchange Act"), which requires TOTAL to disclose whether it or any of its affiliates has engaged during the calendar year in certain Iran-related activities, including those targeted under ISA, without regard to whether such activities are sanctionable under ISA, and any transaction or dealing with the Government of Iran that is not conducted pursuant to a specific authorization of the U.S. government (see point 3.9.2., below). For any annual report that contains responsive Section 13(r) disclosure, an "Iran Notice" is separately filed with the United States Securities and Exchange Commission ("SEC"). The SEC must notify the President and U.S. Congress, and the President must initiate an investigation and make a sanctions determination within 180 days after initiating the investigation. TOTAL believes that its Iran-related activities required to be disclosed by Section 13(r) are not sanctionable, and TOTAL has not been informed that it is at risk of possible imposition of sanctions for activities previously disclosed.

The United States has adopted other sanctions measures, including the National Defense Authorization Act of Fiscal Year 2012 ("NDAA 2012"),which authorizes the imposition of sanctions on foreign financial institutions engaged in certain transactions, the Iran Freedom and Counter-Proliferation Act of 2012 ("IFCA"), which, amongst other things, authorizes the imposition of sanctions on entities that knowingly provided goods or services to the energy, shipbuilding, and shipping sectors, or to port operations, of Iran, and Executive Order 13645, which, in addition to amending Executive Order 13622 as discussed above, implements certain provisions of IFCA and authorizes additional sanctions against, amongst other things, foreign financial institutions that engage in certain transactions, potentially including those for the sale, supply, or transfer to or from Iran of natural gas, and for the purchase of petroleum or petroleum products from Iran. TOTAL does not conduct activities that it believes would be sanctionable under IFCA, NDAA 2012 or Executive Order 13645.

Also with regard to Iran, France and the EU have adopted measures, based on United Nations Security Council resolutions, which restrict the movement of certain individuals and goods to or from Iran as well as certain financial transactions with Iran, in each case when such individuals, goods or transactions are related to nuclear proliferation and weapons activities or likely to contribute to their development. In July and October 2010, the EU adopted new restrictive measures regarding Iran. Among other things, the supply of key equipment and technology in the following sectors of the oil and gas industry in Iran are prohibited: refining, Liquefied Natural Gas, exploration and production. The prohibition extends to technical assistance, training and financial assistance in connection with such items. Extension of loans or credit to, acquisition of shares in, entry into joint ventures with or other participation in enterprises in Iran (or Iranian-owned enterprises outside of Iran) engaged in any of the targeted sectors also is prohibited. Moreover, with respect to restrictions on transfers of funds and on financial services, any transfer of at least €40,000 or equivalent to or from an Iranian individual or entity shall require a prior authorization of the competent authorities of the EU Member States. TOTAL conducts its activities in compliance with these EU measures.

On January 23, 2012, the Council of the EU prohibited the purchase, import and transport of Iranian oil and petroleum and petrochemical products by European persons and by entities constituted under the laws of an EU Member State. Prior to that date, TOTAL had ceased these now-prohibited activities.

With respect to Syria, the EU adopted measures in May 2011 with criminal and financial penalties that prohibit the supply of certain equipment to Syria, as well as certain financial and asset transactions with respect to a list of named individuals and entities. These measures apply to European persons and to entities constituted under the laws of an EU Member State. In September 2011, the EU adopted further measures, including, notably, a prohibition on the purchase, import or transportation from Syria of crude oil and petroleum products. Since early September 2011, the Group ceased to purchase hydrocarbons from Syria. On December 1, 2011, the EU extended sanctions against, among others, three state-owned Syrian oil firms, including General Petroleum Corporation, TOTAL's co-contracting partner in the production sharing agreement signed in 1988 (Deir Es Zor licence) and the Tabiyeh contract. The United States also has various measures regarding Syria. Since early December 2011, the Group has ceased its activities that contribute to oil and gas production in Syria.

In addition, the U.S. Treasury Department's Office of Foreign Assets Control (referred to as "OFAC") administers and enforces economic sanctions programs, some of which are based on the United Nations Security Council resolutions referred to above, against targeted foreign countries, territories, entities and individuals (including those engaged in activities related to terrorism or the proliferation of weapons of mass destruction and other threats to the national security, foreign policy or economy of the United States). The activities that are restricted depend on the sanctions program and targeted country or parties, and civil and/or criminal penalties, imposed on a per transaction basis, can be substantial. These OFAC sanctions generally apply to U.S. persons and activities taking place in the United States or that are otherwise subject to U.S. jurisdiction. Sanctions administered by OFAC target, among others, Cuba, Iran, Sudan and Syria. TOTAL does not believe that these sanctions are applicable to any of its activities in the OFAC-targeted countries.

Moreover, many U.S. states have adopted legislation requiring state pension funds to divest themselves of securities in any company with active business operations in Iran, and state contracts not to be awarded to such companies. State insurance regulators have adopted similar initiatives relating to investments by insurance companies in companies doing business with the Iranian oil and gas, nuclear and defense sectors. If TOTAL's presence in Iran were determined to fall within the prohibited scope of these laws, and TOTAL were not to qualify for any available exemptions, certain U.S. institutions holding interests in TOTAL may be required to sell their interests. If significant, sales of securities resulting from such laws and/or regulatory initiatives could have an adverse effect on the prices of TOTAL's securities.

TOTAL continues to closely monitor legislative and other developments in France, the EU and the United States, including the Joint Plan of Action recently announced among Iran and the P5+1 countries (China, France, Russia, the United Kingdom and the United States of America, as well as Germany) regarding limits on Iran's nuclear activities and the suspension of certain United States and European Union sanctions regarding Iran, in order to determine whether its limited activities or presence in sanctioned or potentially sanctioned jurisdictions could subject TOTAL to the application of sanctions.

TOTAL is also closely monitoring developments of the situation in Crimea and any related regulations and/or economic sanctions that could be adopted by the authorities.

TOTAL cannot assure that current or future regulations or developments will not have a negative impact on its business or reputation.

3.9.2. Cuba, Iran and Syria

Provided in this section is certain information relating to TOTAL's activities in Cuba and its presence in Iran and Syria. For more information on U.S. and EU restrictions relevant to TOTAL in these jurisdictions, see point 3.9.1. above.

Cuba

In 2013, Marketing & Services had limited marketing activities for the sale of specialty products to non-state entities in Cuba and paid taxes of approximately €425,000 on such activities. Hutchinson, a Refining & Chemicals affiliate, had limited sales in Cuba of transmission belts for agricultural machinery via a government-controlled intermediary that received a commission of approximately €77,000. In addition, Trading & Shipping purchased hydrocarbons pursuant to spot contracts from a state-controlled entity for approximately €101 million and sold energy options to this state-controlled entity for approximately €4 million.

Iran

Section 13(r) of the Securities Exchange Act of 1934, as amended, requires the Company to disclose whether it or any of its affiliates engaged during the 2013 calendar year in certain Iran-related activities. While TOTAL has not engaged in any activity that would be required to be disclosed pursuant to subparagraphs (a), (b), (c), (d) (i) or (d) (ii) of Section 13(r) (1), affiliates of the Company may be deemed to have engaged in certain transactions or dealings with the government of Iran that would require disclosure pursuant to Section 13(r) (1) (d) (iii), as discussed below.

The Group has no exploration and production activities in Iran and maintains a local office in Iran solely for non-operational functions. Some payments are yet to be reimbursed to the Group with respect to past expenditures and remuneration under buyback contracts entered into between 1997 and 1999 with the National Iranian Oil Company ("NIOC") for the development of the South Pars 2&3 and Dorood fields. With respect to these contracts, development operations have been completed and the Group is no longer involved in the operation of these fields. In 2013, Total E&P Iran (100%), Elf Petroleum Iran (99.8%), Total Sirri (100%) and Total South Pars (99.8%) collectively made payments of less than €0.5 million to (i) the Iranian administration for taxes and social security contributions concerning the personnel of the aforementioned local office and residual buyback contract-related obligations, and (ii) Iranian public entities for payments with respect to the maintenance of the aforementioned local office (*e.g.*, utilities, telecommunications). TOTAL expects similar payments to be made in 2014, and it did not recognize any revenues or profits from the aforementioned in 2013.

In 2013, as part of its ongoing global strategy for the protection of its intellectual property, TOTAL paid taxes of approximately €1,500 to the Iranian national intellectual property office with respect to patents filed in Iran prior to 2013. The Group anticipates paying similar taxes in the future.

Total E&P UK Limited ("TEP UK"), a wholly-owned affiliate of TOTAL, had limited contacts in 2013 with the Iranian Oil Company UK Ltd ("IOC"), a subsidiary of NIOC. These contacts related to agreements governing certain transportation, processing and operation services formerly provided to a joint venture at the Rhum field in the UK, co-owned by BP (50%, operator) and IOC (50%), by a joint venture at the Bruce field between BP (37%, operator), TEP UK (43.25%), BHP Billiton Petroleum Great Britain Ltd (16%) and Marubeni Oil & Gas (North Sea) Limited (3.75%) and by TEP UK's Frigg UK Association pipeline (100%). To TOTAL's knowledge, no services have been provided under the aforementioned agreements since November 2010, when the Rhum field stopped production following the adoption of EU sanctions, other than critical safety-related services (*i.e.*, monitoring and marine inspection of the Rhum facilities), which are permitted by EU sanctions regulations. These agreements led to the signature in 2005 of an agreement by TEP UK and Naftiran Intertrade Co. ("NICO") (IOC's parent company and a subsidiary of NIOC) for the purchase by TEP UK of Rhum field natural gas liquids from NICO. This agreement was terminated by TEP UK with effect from December 2013 and, prior to that, there had been no purchases under this agreement since November 2010. TEP UK's contacts with IOC and NICO in 2013 in regard to the aforementioned agreements were limited to exchanging letters and notifications regarding contract administration and declarations of force majeure. TOTAL did not recognize any revenues or profits from the aforementioned in 2013. Furthermore, on October 22, 2013, the UK government notified IOC of its decision to apply a temporary management scheme to IOC's interest in the Rhum field within the meaning of UK Regulations 3 and 5 of the Hydrocarbons (Temporary Management Scheme) Regulations 2013 (the "Hydrocarbons Regulations"). On December 6, 2013, the UK government further authorized TEP UK, among others, under Article 43a of EU Regulation 267/2012, as amended by 1263/2012 and under Regulation 9 of the Hydrocarbons Regulations, to carry out activities in relation to the operation and production of the Rhum field. As a result, TEP UK does not anticipate having any contacts with IOC in 2014. In addition, on September 4, 2013, the U.S. Treasury Department issued a license to BP authorizing BP and certain others to engage in various activities relating to the operation and production of the Rhum field. The Rhum field remains shut down, but it is anticipated that production could restart at some point in 2014.

The Group does not purchase Iranian hydrocarbons or own or operate any refineries or chemicals plants in Iran.

Until December 2012, at which time it sold its entire interest, the Group held a 50% interest in the company Beh Total (now named Beh Tam) along with Behran Oil (50%), a company controlled by entities with ties to the government of Iran. As part of the sale of the Group's interest in Beh Tam, TOTAL S.A. agreed to license the trademark "Total" to Beh Tam for an initial 3-year period for the sale by Beh Tam of lubricants to domestic consumers in Iran. Total E&P Iran ("TEPI"), a wholly-owned affiliate of TOTAL S.A., expects to receive, on behalf of TOTAL S.A., annual royalty payments in Rials from Beh Tam during the period 2014-2016 for such license. Each payment will be based on Beh Tam's sales of lubricants during the previous calendar year. Representatives of the Group and Beh Tam met twice in 2013 to discuss the local lubricants market and further discussions are expected to take place in the future. TEPI received payments in 2013 from Beh Tam in Rials of approximately €2.6 million that corresponded to an outstanding 2011 Beh Total dividend payment and the settling of debts related to the Group's prior ownership. Similar payments, in addition to the royalty payments described above, are expected to be received from Beh Tam in 2014.

Total Marketing Middle East FZE ("TMME"), a wholly-owned affiliate of the Group, which had stopped sales of lubricants to Beh Total at the end of 2012, decided in 2013 to resume such sales to Beh Tam in Iran. The sale in 2013 of approximately 188 t of lubricants generated gross revenue of approximately €1.0 million and a net profit of approximately €0.2 million. TMME expects to continue such activity in 2014.

Total Oil Turkiye A.S. ("TOT A.S."), a company wholly owned by the Group and three Group employees, sold in 2013 approximately 81 t of additives to a private held Turkish company not affiliated with the Group, which subsequently sold such additives to Beh Tam for the manufacture of lubricants. This activity generated for TOT A.S. gross revenue of approximately €296,000 and a net profit of approximately €54,000. TOT A.S. does not expect to continue this activity in 2014.

Total Ethiopia Ltd ("TEL"), an Ethiopian company held 99.99% by the Group and the rest by three Group Employees, paid approximately €63,000 in 2013 to Merific Iran Gas Co, an Ethiopian company majority-owned by entities affiliated with the government of Iran, pursuant to a contract for the transport and storage of LPG in Ethiopia purchased by TEL from international markets. TEL expects to stop pursuing this activity in 2014.

Total Belgium NV ("Total Belgium"), a company held 99.99% by the Group and the rest by an individual, provided in early 2013 fuel payment cards to Iranian diplomatic missions in Belgium for use in the Group's service stations. In 2013, these activities generated gross revenue of approximately €27,500 and net income of approximately €550. The Company terminated this contractual agreement in 2013. In addition, Total Belgium supplied approximately 11,000 liters of heating fuel (gasoil) to the Iranian Embassy in Brussels. In 2013, this activity generated gross revenue of approximately €9,500 and net income of approximately €1,500. Such supply arrangements ceased in December 2013 and there are no plans to resume such supply.

Total Deutschland GmbH ("Total Deutschland"), a German company wholly-owned by the Group, provided in 2013 fuel payment cards to Iranian diplomatic missions in Germany for use in the Group's service stations. In 2013, these activities generated gross revenue of approximately €4,400 and a net profit of approximately €50. Total Deutschland is in the process of terminating these arrangements.

In addition, the Group holds a 50% interest in, but does not operate, Samsung Total Petrochemicals Co. Ltd ("STC"), a South Korean incorporated joint venture with Samsung General Chemicals Co., Ltd. (50%). In reliance on the exemption provided in Section 1245 (d) (4) (d) of the National Defense Authorization Act (NDAA) announced on December 7, 2012, STC purchased approximately 150,000 t of condensates in early 2013 directly or indirectly from companies affiliated with the Iranian government for approximately €94 million. As such condensates are used by STC as inputs for its manufacturing processes, it is not possible to estimate the revenues from sales or net income attributable to such purchases. STC stopped such purchases in March 2013.

Syria

Since early December 2011, TOTAL has ceased its activities that contribute to oil and gas production in Syria and maintains a local office solely for non-operational functions. In 2013, TOTAL made payments of approximately €0.5 million to Syrian government agencies in the form of taxes and contributions for services rendered by the Syrian public sector in relation to the maintenance of the aforementioned office and its personnel.

3.10. Risks related to competition

TOTAL's competitors are comprised of national oil companies and international oil companies. The evolutions of the energy sector have opened the door to new competitors, increased market price volatility and called the viability of long-term contracts into question.

TOTAL is subject to competition from other oil companies in the acquisition of assets and licenses for the exploration and production of oil and natural gas as well as for the sale of manufactured products based on crude and refined oil. In the gas sector, major producers are becoming interested in the downstream value chain and are competing directly with established distribution companies, including those that belong to the Group. Increased competitive pressure could have a significant negative effect on the sales prices, margins and market shares of the Group's companies.

The pursuit of unconventional gas development, particularly in the United States, has contributed to falling market prices and a marked difference between spot and long-term contract prices. The competitiveness of long-term contracts indexed to oil prices could be affected if this discrepancy persists and if it should prove difficult to invoke price revision clauses.

The major international oil companies in competition with TOTAL are ExxonMobil, Royal Dutch Shell, Chevron and BP. As of December 31, 2013, TOTAL ranked fifth among these companies in terms of market capitalization(1).

(1) Source: Reuters.

4. Legal and arbitration proceedings

There are no governmental, legal or arbitration proceedings, including any proceeding that the Company is aware of, threatened with or even pending (including the main legal proceedings described hereafter) that could have, or could have had during the last twelve months, a material impact on the Group's financial situation or profitability.

The main legal proceedings in which the Group's companies are involved are described below.

4.1. Antitrust investigations

The principal antitrust proceedings in which the Group's companies are involved are described below.

4.1.1. Refining & Chemicals segment

As part of the spin-off of Arkema[1] in 2006, TOTAL S.A. and certain other Group companies granted to Arkema for a period of ten years a guarantee for potential monetary consequences related to antitrust proceedings arising from events prior to the spin-off. As of December 31, 2013, all public and civil proceedings covered by the guarantee were definitively resolved in Europe and in the United States. Despite the fact that Arkema has implemented since 2001 compliance procedures that are designed to prevent its employees from violating antitrust provisions, it is not possible to exclude the possibility that the relevant authorities could commence additional proceedings involving Arkema regarding events prior to the spin-off.

4.1.2. Marketing & Services segment

– The administrative procedure opened by the European Commission against TOTAL Nederland N.V and TOTAL S.A., as parent company, in relation to practices regarding a product line of the Marketing & Services segment, resulted in a condemnation in 2006 that became definitive in 2012. The resulting fine (€20.25 million) and interest thereon were paid during the first quarter of 2013.

– Following the appeal lodged by the Group's companies against the European Commission's 2008 decision fining Total Marketing Services an amount of €128.2 million, in relation to practices regarding a product line of the Marketing & Services segment, which the Company had already paid, and concerning which TOTAL S.A. was declared jointly liable as the parent company, the relevant European court decided during the third quarter of 2013 to reduce the fine imposed on Total Marketing Services to €125.5 million without modifying the liability of TOTAL S.A. as parent company. Appeals have been lodged against this judgment.

– In the United Kingdom, a settlement took place in the third quarter of 2013 putting an end to the civil proceeding initiated against TOTAL S.A., Total Marketing Services and other companies, by third parties alleging damages in connection with practices already sanctioned by the European Commission. A similar civil proceeding is pending in the Netherlands. At this stage, the plaintiffs have not communicated the amount of their claim.

– Finally, in Italy, in 2013, a civil proceeding was initiated against TOTAL S.A. and its subsidiary Total Aviazione Italia Srl before the competent Italian civil court. The plaintiff claims against TOTAL S.A., its subsidiary and other third parties, damages that it estimates to be nearly €908 million. This procedure follows practices that had been sanctioned by the Italian competition authority in 2006. The existence and the assessment of the alleged damages in this procedure involving multiple defendants are strongly contested.

Whatever the evolution of the proceedings described above, the Group believes that their outcome should not have a material adverse effect on the Group's financial situation or consolidated results.

4.2. Grande Paroisse

An explosion occurred at the Grande Paroisse industrial site in the city of Toulouse in France on September 21, 2001. Grande Paroisse, a former subsidiary of Atofina which became a subsidiary of Elf Aquitaine Fertilisants on December 31, 2004, as part of the reorganization of the Chemicals segment, was principally engaged in the production and sale of agricultural fertilizers. The explosion, which involved a stockpile of ammonium nitrate pellets, destroyed a portion of the site and caused the death of thirty-one people, including twenty-one workers at the site, and injured many others. The explosion also caused significant damage to certain property in part of the city of Toulouse.

This plant has been closed and individual assistance packages have been provided for employees. The site has been rehabilitated.

On December 14, 2006, Grande Paroisse signed, under the supervision of the city of Toulouse, a deed whereby it donated the former site of the AZF plant to the greater agglomeration of Toulouse (CAGT) and the *Caisse des dépôts et consignations* and its subsidiary ICADE. Under this deed, TOTAL S.A. guaranteed the site remediation obligations of Grande Paroisse and granted a €10 million endowment to the InNaBioSanté research foundation as part of the setting up of a cancer research center at the site by the city of Toulouse.

After having articulated several hypotheses, the Court-appointed experts did not maintain in their final report filed on May 11, 2006, that the accident was caused by pouring a large quantity of a chlorine compound over ammonium nitrate. Instead, the experts

(1) Arkema is used in this section to designate those companies of the Arkema group whose ultimate parent company is Arkema S.A. Arkema became an independent company after being spun-off from TOTAL S.A. in May 2006.

have retained a scenario where a container of chlorine compound sweepings was poured between a layer of wet ammonium nitrate covering the floor and a quantity of dry agricultural nitrate at a location not far from the principal storage site. This is claimed to have caused an explosion which then spread into the main storage site. Grande Paroisse was investigated based on this new hypothesis in 2006; Grande Paroisse is contesting this explanation, which it believes to be based on elements that are not factually accurate.

On July 9, 2007, the investigating magistrate brought charges against Grande Paroisse and the former Plant Manager before the Toulouse Criminal Court. In late 2008, TOTAL S.A. and Mr. Thierry Desmarest, Chairman and CEO at the time of the event, were summoned to appear in Court pursuant to a request by a victims association.

On November 19, 2009, the Toulouse Criminal Court acquitted both the former Plant Manager, and Grande Paroisse due to the lack of reliable evidence for the explosion. The Court also ruled that the summonses against TOTAL S.A. and Mr. Thierry Desmarest were inadmissible.

Due to the presumption of civil liability that applied to Grande Paroisse, the Court declared Grande Paroisse civilly liable for the damages caused by the explosion to the victims in its capacity as custodian and operator of the plant.

The Prosecutor's office, together with certain third parties, appealed the Toulouse Criminal Court verdict. In order to preserve its rights, Grande Paroisse lodged a cross-appeal with respect to civil charges.

By its decision of September 24, 2012, the Court of Appeal of Toulouse (*Cour d'appel de Toulouse*) upheld the lower court verdict pursuant to which the summonses against TOTAL S.A. and Mr. Thierry Desmarest were determined to be inadmissible. This element of the decision has been appealed by certain third parties before the French Supreme Court (*Cour de cassation*).

The Court of Appeal considered, however, that the explosion was the result of the chemical accident described by the court-appointed experts. Accordingly, it convicted the former Plant Manager and Grande Paroisse. This element of the decision has been appealed by the former Plant Manager and Grande Paroisse before the French Supreme Court (*Cour de cassation*), which has the effect of suspending their criminal sentences.

A compensation mechanism for victims was set up immediately following the explosion. €2.3 billion was paid for the compensation of claims and related expenses amounts. A €12.7 million reserve remains booked in the Group's Consolidated Financial Statements as of December 31, 2013.

4.3. Blue Rapid and the Russian Olympic Committee – Russian regions and Interneft

Blue Rapid, a Panamanian company, and the Russian Olympic Committee filed a claim for damages with the Paris Commercial Court against Elf Aquitaine, alleging a so-called non-completion by a former subsidiary of Elf Aquitaine of a contract related to an exploration and production project in Russia negotiated in the early 1990s. Elf Aquitaine believed this claim to be unfounded and opposed it. On January 12, 2009, the Commercial Court of Paris rejected Blue Rapid's claim against Elf Aquitaine and found that the Russian Olympic Committee did not have standing in the matter. Blue Rapid and the Russian Olympic Committee appealed this decision. On June 30, 2011, the Court of Appeal of Paris dismissed as inadmissible the claim of Blue Rapid and the Russian Olympic Committee against Elf Aquitaine, notably on the grounds of the contract having lapsed. Blue Rapid and the Russian Olympic Committee appealed this decision to the French Supreme Court.

In connection with the same facts, and fifteen years after the termination of the exploration and production contract, a Russian company, which was held not to be the contracting party to the contract, and two regions of the Russian Federation that were not even parties to the contract, launched an arbitration procedure against the aforementioned former subsidiary of Elf Aquitaine that was liquidated in 2005, claiming alleged damages of U.S.$22.4 billion. For the same reasons as those successfully adjudicated by Elf Aquitaine against Blue Rapid and the Russian Olympic Committee, the Group considers this claim to be unfounded as a matter of law and fact. The Group has lodged a criminal complaint to denounce the fraudulent claim of which the Group believes it is a victim, and has taken and reserved its rights to take other actions and measures to defend its interests.

4.4. Iran

In 2003, the United States Securities and Exchange Commission (SEC) followed by the Department of Justice (DoJ) issued a formal order directing an investigation in connection with the pursuit of business in Iran by certain oil companies including, among others, TOTAL. The inquiry concerned an agreement concluded by the Company with consultants concerning gas fields in Iran and aimed at verifying whether certain payments made under this agreement would have benefited Iranian officials in violation of the Foreign Corrupt Practices Act (FCPA) and the Company's accounting obligations.

In late May 2013, and after several years of discussions, TOTAL reached settlements with the U.S. authorities (a Deferred Prosecution Agreement with the DoJ and a Cease and Desist Order with the SEC). These settlements, which put an end to these investigations, were concluded without admission of guilt and in exchange for TOTAL respecting a number of obligations, including the payment of a fine ($245.2 million) and civil compensation ($153 million) that occurred during the second quarter of 2013. The reserve of $398.2 million that was booked in the financial statements as of June 30, 2012, has been fully released. By virtue of these settlements, TOTAL also accepted to appoint a French independent compliance monitor to review the Group's compliance program and to recommend possible improvements.

With respect to the same facts, TOTAL and its Chairman and Chief Executive Officer, who was President of the Middle East at the time of the facts, were placed under formal investigation in France following a judicial inquiry initiated in 2006. In late May 2013, the Prosecutor's office recommended that the case be sent to trial. The investigating magistrate has not yet issued his decision.

At this point, the Company considers that the resolution of these cases is not expected to have a significant impact on the Group's financial situation or consequences for its future planned operations.

4.5. Libya

In June 2011, the United States Securities and Exchange Commission (SEC) issued to certain oil companies – including, among others, TOTAL – a formal request for information related to their operations in Libya. In April 2013, the SEC notified TOTAL of the closure of the investigation while stating that it does not intend to take further action as far as TOTAL is concerned.

4.6. Oil-for-Food Program

Several countries have launched investigations concerning possible violations related to the United Nations (UN) Oil-for-Food Program in Iraq.

Pursuant to a French criminal investigation, certain current or former Group Employees were placed under formal criminal investigation for possible charges as accessories to the misappropriation of Corporate assets and as accessories to the corruption of foreign public agents. The Chairman and Chief Executive Officer of the Company, formerly President of the Group's Exploration & Production division, was also placed under formal investigation in October 2006. In 2007, the criminal investigation was closed and the case was transferred to the Prosecutor's office. In 2009, the Prosecutor's office recommended to the investigating magistrate that the case against the Group's current and former employees and TOTAL's Chairman and Chief Executive Officer not be pursued.

In early 2010, despite the recommendation of the Prosecutor's office, a new investigating magistrate, having taken over the case, decided to indict TOTAL S.A. on bribery charges as well as complicity and influence peddling. The indictment was brought eight years after the beginning of the investigation without any new evidence being introduced.

In October 2010, the Prosecutor's office recommended to the investigating magistrate that the case against TOTAL S.A., the Group's former employees and TOTAL's Chairman and Chief Executive Officer not be pursued. However, by ordinance notified in early August 2011, the investigating magistrate on the matter decided to send the case to trial. On July 8, 2013, TOTAL S.A., the Group's former employees and TOTAL's Chairman and Chief Executive Officer were cleared of all charges by the Criminal Court, which found that none of the offenses for which they had been prosecuted were established. On July 18, 2013, the Prosecutor's office appealed the parts of the Criminal Court's decision acquitting TOTAL S.A. and certain of the Group's former employees. TOTAL's Chairman and Chief Executive Officer's acquittal issued on July 8, 2013 is irrevocable since the Prosecutor's office did not appeal this part of the Criminal Court's decision.

4.7. Italy

As part of an investigation led by the Prosecutor of the Republic of the Potenza Court, Total Italia and certain Group Employees were the subject of an investigation related to certain calls for tenders that Total Italia made for the preparation and development of an oil field. On February 16, 2009, as a preliminary measure before the proceedings went before the Court, the preliminary investigation judge of Potenza served notice to Total Italia of a decision that would have suspended the concession for this field for one year. Total Italia appealed the decision by the preliminary investigation judge before the Court of Appeal of Potenza. In a decision dated April 8, 2009, the Court reversed the suspension of the concession and appointed for one year, *i.e.,* until February 16, 2010, a judicial administrator to supervise the operations related to the development of the concession, allowing the Tempa Rossa project to continue.

The criminal investigation was closed in the first half of 2010.

In May 2012, the Judge of the preliminary hearing decided to dismiss the charges against some of the Group's employees and to refer the case for trial on a reduced number of charges. The trial started on September 26, 2012.

4.8. Rivunion

On July 9, 2012, the Swiss Tribunal Fédéral (Switzerland's Supreme Court) rendered a decision against Rivunion, a wholly-owned subsidiary of Elf Aquitaine, confirming a tax reassessment in the amount of CHF 171 million (excluding interest for late payment). According to the Tribunal, Rivunion was held liable as tax collector of withholding taxes owed by the beneficiaries of taxable services. Rivunion, in liquidation since March 13, 2002 and unable to recover the amounts corresponding to the withholding taxes in order to meet its fiscal obligations, has been subject to insolvency proceedings since November 1, 2012. On August 29, 2013, the Swiss federal tax administration lodged a claim as part of the insolvency proceedings of Rivunion, for an amount of CHF 284 million, including CHF 171 million of principal as well as interest for late payment.

4.9. Total Gabon

On February 14, 2014, Total Gabon received a tax re-assessment notice from the *Ministère de l'Économie et de la Prospective* of the Gabonese Republic accompanied by a partial tax collection notice, following the tax audit of Total Gabon in relation to the years 2008 to 2010. The amount referred to in the above tax re-assessment notice is 805 million US dollars.

The partial tax collection procedure was suspended on March 5, 2014.

Total Gabon disputes the grounds for the re-assessment and the associated amounts. Total Gabon intends to take all actions necessary to assert its rights and protect its interests.

4.10 Kashagan

In Kazakhstan, the Atyrau Region Environmental Department ("ARED") launched against the consortium developing the Kashagan field, in which TOTAL holds an interest of 16.81%, a procedure alleging non-compliance with environmental legislation related to gas emissions (flaring). ARED issued a claim on March 7, 2014, for an amount of approximately US dollars 737 million (KZT 134 billion), of which TOTAL's share would be approximately US dollars 124 million (KZT 22.5 billion). The Kashagan project's consortium disputes these allegations.

5. Insurance and risk management

5.1. Organization

TOTAL has its own reinsurance company, Omnium Reinsurance Company (ORC).ORC is integrated within the Group's insurance management and is used as a centralized global operations tool for covering the Group companies' insurable risks. It allows the Group's worldwide insurance program to be implemented in compliance with the specific requirements of local regulations applicable in the countries where the Group operates.

Some countries may require the purchase of insurance from a local insurance company. If the local insurer accepts to cover the subsidiary of the Group in compliance with its worldwide insurance program, ORC negotiates a retrocession of the covered risks from the local insurer. As a result, ORC enters into reinsurance contracts with the subsidiaries' local insurance companies, which transfer most of the risk to ORC.

At the same time, ORC negotiates a reinsurance program at the Group level with oil industry mutual insurance companies and commercial reinsurance markets. ORC allows the Group to better manage price variations in the insurance market by taking on a greater or lesser amount of risk corresponding to the price trends in the insurance market.

In 2013, the net amount of risk retained by ORC after reinsurance was a maximum of $54 million per onshore third-party liability insurance claim, $87 million per offshore third-party liability insurance claim and $75 million per property damage and/or business interruption insurance claim. Accordingly, in the event of any loss giving rise to an aggregate insurance claim, the effect on ORC would be limited to its maximum retention of $162 million per occurrence.

5.2. Risk and insurance management policy

In this context, the Group risk and insurance management policy is to work with the relevant internal department of each subsidiary to:

- define scenarios of major disaster risks (estimated maximum loss);
- assess the potential financial impact on the Group should a catastrophic event occur;
- help to implement measures to limit the probability that a catastrophic event occurs and the financial consequences if such event should occur; and
- manage the level of risk from such events to be either covered internally by the Group or transferred to the insurance market.

5.3. Insurance policy

The Group has worldwide property insurance and third-party liability coverage for all its subsidiaries. These programs are contracted with first-class insurers (or reinsurers and oil and gas industry mutual insurance companies through ORC).

The amounts insured depend on the financial risks defined in the disaster scenarios and the coverage terms offered by the market (available capacities and price conditions).

More specifically for:

– Third-party liability insurance: since the maximum financial risk cannot be evaluated by a systematic approach, the amounts insured are based on market conditions and oil and gas industry practice. In 2013, the Group's third-party liability insurance for any liability (including potential accidental environmental liabilities) was capped at $850 million (onshore) and $750 million (offshore).

– Property damage and business interruption: the amounts insured vary by sector and by site and are based on the estimated cost of and scenarios of reconstruction under maximum loss scenarios and on insurance market conditions. The Group subscribed for business interruption coverage in 2013 for its main refining and petrochemical sites.

For example, for the Group's highest risks (North Sea platforms and main refineries and petrochemical plants), in 2013 the insurance limit for the Group share of the installations was approximately $1.7 billion for the Refining & Chemicals segment and approximately $1.6 billion for the Upstream segment.

Deductibles for property damage and third-party liability fluctuate between €0.1 and €10 million depending on the level of risk and liability, and are borne by the relevant subsidiaries. For business interruption, coverage is triggered sixty days after the occurrence giving rise to the interruption. In addition, the main refineries and petrochemical plants bear a combined retention for property damage and business interruption of $50 million per insurance claim.

Other insurance contracts are bought by the Group in addition to property damage and third-party liability coverage, mainly for car fleets, credit insurance and employee benefits. These risks are mostly underwritten by outside insurance companies.

The above-described policy is given as an example of a situation as of a given date and cannot be considered as representative of future conditions. The Group's insurance policy may be changed at any time depending on the market conditions, specific circumstances and on the General Management's assessment of the risks incurred and the adequacy of their coverage.

TOTAL believes that its insurance coverage is in line with industry practice and sufficient to cover normal risks in its operations. However, the Group is not insured against all potential risks. In the event of a major environmental disaster, for example, TOTAL's liability may exceed the maximum coverage provided by its third-party liability insurance. The loss TOTAL could suffer in the event of such disaster would depend on all the facts and circumstances of the event and would be subject to a whole range of uncertainties, including legal uncertainty as to the scope of liability for consequential damages, which may include economic damage not directly connected to the disaster. The Group cannot guarantee that it will not suffer any uninsured loss and there can be no guarantee, particularly in the case of a major environmental disaster or industrial accident, that such loss would not have a material adverse effect on the Group.