

Financial and Operating Information 2012-2016

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Basis of preparation

BP prepares its consolidated financial statements included within *BP Financial and Operating Information 2012-2016* on the basis of International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB), IFRS as adopted by the European Union (EU) and in accordance with the provisions of the UK Companies Act 2006. IFRS as adopted by the EU differs in certain respects from IFRS as issued by the IASB. The differences have no impact on the group's consolidated financial statements for the years presented. Certain non-GAAP information is also presented as explained on the relevant pages.

* Words with this symbol are defined in the glossary on page 84.

Financial performance

Highlights

	2012	2013	2014	2015	2016
Underlying replacement cost profit* (\$ million) ^a	17,071	13,428	12,136	5,905	2,585
per ordinary share* (cents)	89.70	70.92	66.00	32.22	13.79
per ADS (dollars)	5.38	4.26	3.96	1.93	0.83
Non-operating items and fair value accounting effects*, net of tax (\$ million)	(5,643)	10,253	(4,063)	(11,067)	(3,584)
Replacement cost profit (loss)* (\$ million) ^a	11,428	23,681	8,073	(5,162)	(999)
per ordinary share* (cents)	60.05	125.08	43.90	(28.18)	(5.33)
per ADS (dollars)	3.60	7.50	2.63	(1.69)	(0.32)

^a Profit (loss) attributable to BP shareholders.

External environment

	2012	2013	2014	2015	2016
BP average liquids* realizations (\$/bbl) ^{a b}	102.10	99.24	88.88	47.32	38.27
BP average natural gas realizations (\$/mcf)	4.75	5.35	5.70	3.80	2.84
BP average refining marker margin* (\$/bbl)	18.2	15.4	14.4	17.0	11.8

^a Based on sales by consolidated subsidiaries only – this excludes equity-accounted entities.

^b Production methodology for our Technical Service Contract arrangement in Iraq has been simplified to exclude the impact of oil price movements on lifting imbalances. A minor adjustment has been made to comparative data for prior periods back to 2014. There is no impact on the financial results.

Group income statement

For the year ended 31 December	\$ million				
	2012	2013	2014	2015	2016
Sales and other operating revenues	375,765	379,136	353,568	222,894	183,008
Earnings from joint ventures – after interest and tax	260	447	570	(28)	966
Earnings from associates – after interest and tax	3,675	2,742	2,802	1,839	994
Interest and other income	1,677	777	843	611	506
Gains on sale of businesses and fixed assets	6,697	13,115	895	666	1,132
Total revenues and other income	388,074	396,217	358,678	225,982	186,606
Purchases	(292,774)	(298,351)	(281,907)	(164,790)	(132,219)
Production and manufacturing expenses ^a	(33,926)	(27,527)	(27,375)	(37,040)	(29,077)
Production and similar taxes	(8,158)	(7,047)	(2,958)	(1,036)	(683)
Depreciation, depletion and amortization	(12,687)	(13,510)	(15,163)	(15,219)	(14,505)
Impairment and losses on sale of businesses and fixed assets	(6,275)	(1,961)	(8,965)	(1,909)	1,664
Exploration expense	(1,475)	(3,441)	(3,632)	(2,353)	(1,721)
Distribution and administration expenses	(13,010)	(12,611)	(12,266)	(11,553)	(10,495)
Profit (loss) before interest and taxation	19,769	31,769	6,412	(7,918)	(430)
Finance costs ^a	(1,072)	(1,068)	(1,148)	(1,347)	(1,675)
Net finance expense relating to pensions and other post-retirement benefits	(566)	(480)	(314)	(306)	(190)
Profit (loss) before taxation	18,131	30,221	4,950	(9,571)	(2,295)
Taxation ^a	(6,880)	(6,463)	(947)	3,171	2,467
Profit (loss) for the year	11,251	23,758	4,003	(6,400)	172
Attributable to					
BP shareholders	11,017	23,451	3,780	(6,482)	115
Non-controlling interests	234	307	223	82	57
	11,251	23,758	4,003	(6,400)	172
Earnings per share – cents					
Profit (loss) for the year attributable to BP shareholders					
Basic	57.89	123.87	20.55	(35.39)	0.61
Diluted	57.50	123.12	20.42	(35.39)	0.60
Replacement cost results					
Profit (loss) for the year ^b	11,017	23,451	3,780	(6,482)	115
Inventory holding (gains) losses*, net of tax	411	230	4,293	1,320	(1,114)
Replacement cost profit (loss)* for the year	11,428	23,681	8,073	(5,162)	(999)
Net (favourable) unfavourable impact of non-operating items* and fair value accounting effects*, net of tax	5,643	(10,253)	4,063	11,067	3,584
Underlying replacement cost profit* for the year	17,071	13,428	12,136	5,905	2,585
Research and development expenditure amounted to	674	707	663	418	400

^a See pages 16-17 for information on the impact of the Gulf of Mexico oil spill on these income statement line items.

^b Profit (loss) attributable to BP shareholders.

Summarized reported results

Analysis of RC profit (loss)* before interest and tax

	\$ million									
	Q1	Q2	Q3	Q4	2012	Q1	Q2	Q3	Q4	2013
RC profit (loss) before interest and tax										
Upstream	6,983	2,913	4,907	7,688	22,491	5,562	4,400	4,158	2,537	16,657
Downstream	859	(1,732)	2,408	1,329	2,864	1,647	1,016	616	(360)	2,919
TNK-BP	1,064	452	1,282	575	3,373	12,500	—	—	—	12,500
Rosneft	—	—	—	—	—	85	218	792	1,058	2,153
Other businesses and corporate ^a	(641)	(1,365)	(1,152)	(4,631)	(7,789)	(489)	(772)	(704)	(784)	(2,749)
Consolidation adjustment – UPII*	(541)	457	(64)	(428)	(576)	427	129	263	(240)	579
RC profit (loss) before interest and tax	7,724	725	7,381	4,533	20,363	19,732	4,991	5,125	2,211	32,059
Finance costs and net finance expense relating to pensions and other post-retirement benefits	(405)	(390)	(376)	(467)	(1,638)	(404)	(369)	(397)	(378)	(1,548)
RC profit (loss) before taxation	7,319	335	7,005	4,066	18,725	19,328	4,622	4,728	1,833	30,511
Taxation on a RC basis	(2,477)	(186)	(2,405)	(1,995)	(7,063)	(2,653)	(2,138)	(1,462)	(270)	(6,523)
RC profit (loss) for the period	4,842	149	4,600	2,071	11,662	16,675	2,484	3,266	1,563	23,988
Attributable to										
BP shareholders	4,781	104	4,534	2,009	11,428	16,596	2,400	3,178	1,507	23,681
Non-controlling interests	61	45	66	62	234	79	84	88	56	307
RC profit (loss) for the period	4,842	149	4,600	2,071	11,662	16,675	2,484	3,266	1,563	23,988
Earnings on RC profit (loss)										
per ordinary share – cents*	25.19	0.54	23.82	10.53	60.05	86.67	12.62	16.84	8.06	125.08
per ADS – dollars	1.51	0.03	1.43	0.63	3.60	5.20	0.76	1.01	0.48	7.50
RC profit (loss) for the period	4,842	149	4,600	2,071	11,662	16,675	2,484	3,266	1,563	23,988
Inventory holding gains (losses)	1,437	(2,324)	1,059	(766)	(594)	406	(506)	444	(634)	(290)
Taxation (charge) credit on inventory holding gains and losses	(451)	701	(312)	245	183	(139)	148	(118)	169	60
Profit (loss) for the period	5,828	(1,474)	5,347	1,550	11,251	16,942	2,126	3,592	1,098	23,758
Earnings on profit (loss)										
per ordinary share – cents										
Basic	30.39	(7.99)	27.74	7.80	57.89	88.07	10.73	18.57	5.57	123.87
Diluted	29.97	(7.99)	27.59	7.75	57.50	87.61	10.68	18.47	5.54	123.12
per ADS – dollars										
Basic	1.82	(0.48)	1.66	0.47	3.47	5.28	0.64	1.11	0.33	7.43
Diluted	1.80	(0.48)	1.66	0.46	3.45	5.26	0.64	1.11	0.33	7.39

^a Further breakdown is provided in the table below.

Breakdown of Other businesses and corporate	Q1	Q2	Q3	Q4	2012	Q1	Q2	Q3	Q4	2013
Gulf of Mexico oil spill ^b	30	(843)	(56)	(4,126)	(4,995)	(22)	(199)	(30)	(179)	(430)
Other	(671)	(522)	(1,096)	(505)	(2,794)	(467)	(573)	(674)	(605)	(2,319)
Total Other businesses and corporate	(641)	(1,365)	(1,152)	(4,631)	(7,789)	(489)	(772)	(704)	(784)	(2,749)

^b Includes costs related to the Gulf of Mexico oil spill. See Gulf of Mexico oil spill section for further information.

Analysis of underlying RC profit (loss)* before interest and tax

	Q1	Q2	Q3	Q4	2012	Q1	Q2	Q3	Q4	2013
Underlying RC profit (loss) before interest and tax										
Upstream	6,294	4,401	4,366	4,375	19,436	5,702	4,288	4,423	3,852	18,265
Downstream	927	1,133	3,009	1,394	6,463	1,641	1,201	720	70	3,632
TNK-BP	1,157	452	1,294	224	3,127	—	—	—	—	—
Rosneft	—	—	—	—	—	85	218	808	1,087	2,198
Other businesses and corporate	(435)	(540)	(573)	(448)	(1,996)	(461)	(438)	(385)	(614)	(1,898)
Consolidation adjustment - UPII	(541)	457	(64)	(428)	(576)	427	129	263	(240)	579
Underlying RC profit before interest and tax	7,402	5,903	8,032	5,117	26,454	7,394	5,398	5,829	4,155	22,776
Finance costs and net finance expense relating to pensions and other post-retirement benefits	(399)	(386)	(373)	(461)	(1,619)	(394)	(359)	(388)	(368)	(1,509)
Underlying RC profit before taxation	7,003	5,517	7,659	4,656	24,835	7,000	5,039	5,441	3,787	21,267
Taxation on an underlying RC basis	(2,291)	(1,921)	(2,576)	(742)	(7,530)	(2,706)	(2,243)	(1,661)	(922)	(7,532)
Underlying RC profit for the period	4,712	3,596	5,083	3,914	17,305	4,294	2,796	3,780	2,865	13,735
Attributable to										
BP shareholders	4,651	3,551	5,017	3,852	17,071	4,215	2,712	3,692	2,809	13,428
Non-controlling interests	61	45	66	62	234	79	84	88	56	307
Underlying RC profit for the period	4,712	3,596	5,083	3,914	17,305	4,294	2,796	3,780	2,865	13,735
Earnings on underlying RC profit										
per ordinary share – cents	24.51	18.66	26.35	20.19	89.70	22.01	14.26	19.57	15.02	70.92
per ADS – dollars	1.47	1.12	1.58	1.21	5.38	1.32	0.86	1.17	0.90	4.26

Summarized reported results
Analysis of RC profit (loss)* before interest and tax continued

														\$ million
Q1	Q2	Q3	Q4	2014	Q1	Q2	Q3	Q4	2015	Q1	Q2	Q3	Q4	2016
4,659	4,049	3,311	(3,085)	8,934	372	228	743	(2,280)	(937)	(1,205)	(109)	1,196	692	574
794	933	1,231	780	3,738	2,083	1,628	2,562	838	7,111	1,880	1,405	978	899	5,162
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
518	1,024	107	451	2,100	183	510	382	235	1,310	66	246	120	158	590
(526)	(685)	(465)	(1,115)	(2,791)	(631)	(11,202)	(689)	(955)	(13,477)	(1,074)	(5,525)	(441)	(1,117)	(8,157)
90	(76)	370	257	641	(129)	(39)	67	65	(36)	40	(121)	17	(132)	(196)
5,535	5,245	4,554	(2,712)	12,622	1,878	(8,875)	3,065	(2,097)	(6,029)	(293)	(4,104)	1,870	500	(2,027)
(367)	(356)	(358)	(381)	(1,462)	(358)	(364)	(474)	(457)	(1,653)	(440)	(460)	(481)	(484)	(1,865)
5,168	4,889	4,196	(3,093)	11,160	1,520	(9,239)	2,591	(2,554)	(7,682)	(733)	(4,564)	1,389	16	(3,892)
(1,602)	(1,643)	(1,777)	2,158	(2,864)	632	3,013	(1,347)	304	2,602	273	2,346	229	102	2,950
3,566	3,246	2,419	(935)	8,296	2,152	(6,226)	1,244	(2,250)	(5,080)	(460)	(2,218)	1,618	118	(942)
3,475	3,182	2,385	(969)	8,073	2,103	(6,266)	1,234	(2,233)	(5,162)	(485)	(2,247)	1,661	72	(999)
91	64	34	34	223	49	40	10	(17)	82	25	29	(43)	46	57
3,566	3,246	2,419	(935)	8,296	2,152	(6,226)	1,244	(2,250)	(5,080)	(460)	(2,218)	1,618	118	(942)
18.80	17.25	12.97	(5.32)	43.90	11.54	(34.25)	6.73	(12.16)	(28.18)	(2.63)	(12.03)	8.82	0.38	(5.33)
1.13	1.03	0.78	(0.32)	2.63	0.69	(2.05)	0.40	(0.73)	(1.69)	(0.16)	(0.72)	0.53	0.02	(0.32)
3,566	3,246	2,419	(935)	8,296	2,152	(6,226)	1,244	(2,250)	(5,080)	(460)	(2,218)	1,618	118	(942)
102	258	(1,585)	(4,985)	(6,210)	756	627	(1,726)	(1,546)	(1,889)	(132)	1,188	(60)	601	1,597
(49)	(71)	490	1,547	1,917	(257)	(184)	538	472	569	34	(360)	19	(176)	(483)
3,619	3,433	1,324	(4,373)	4,003	2,651	(5,783)	56	(3,324)	(6,400)	(558)	(1,390)	1,577	543	172
19.09	18.26	7.01	(24.18)	20.55	14.28	(31.83)	0.25	(18.01)	(35.39)	(3.16)	(7.60)	8.61	2.62	0.61
18.97	18.15	6.97	(24.18)	20.42	14.21	(31.83)	0.25	(18.01)	(35.39)	(3.16)	(7.60)	8.56	2.60	0.60
1.15	1.10	0.42	(1.45)	1.23	0.86	(1.91)	0.02	(1.08)	(2.12)	(0.19)	(0.46)	0.52	0.16	0.04
1.14	1.09	0.42	(1.45)	1.23	0.85	(1.91)	0.02	(1.08)	(2.12)	(0.19)	(0.46)	0.51	0.16	0.04

														\$ million
Q1	Q2	Q3	Q4	2014	Q1	Q2	Q3	Q4	2015	Q1	Q2	Q3	Q4	2016
(29)	(251)	(33)	(468)	(781)	(323)	(10,747)	(311)	(328)	(11,709)	(794)	(5,106)	(66)	(674)	(6,640)
(497)	(434)	(432)	(647)	(2,010)	(308)	(455)	(378)	(627)	(1,768)	(280)	(419)	(375)	(443)	(1,517)
(526)	(685)	(465)	(1,115)	(2,791)	(631)	(11,202)	(689)	(955)	(13,477)	(1,074)	(5,525)	(441)	(1,117)	(8,157)

														\$ million
Q1	Q2	Q3	Q4	2014	Q1	Q2	Q3	Q4	2015	Q1	Q2	Q3	Q4	2016
4,401	4,655	3,899	2,246	15,201	604	494	823	(728)	1,193	(747)	29	(224)	400	(542)
1,011	733	1,484	1,213	4,441	2,158	1,867	2,302	1,218	7,545	1,813	1,513	1,431	877	5,634
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
271	1,024	110	470	1,875	183	510	382	235	1,310	66	246	120	135	567
(489)	(438)	(293)	(120)	(1,340)	(290)	(401)	(231)	(299)	(1,221)	(178)	(376)	(260)	(424)	(1,238)
90	(76)	370	257	641	(129)	(39)	67	65	(36)	40	(121)	17	(132)	(196)
5,284	5,898	5,570	4,066	20,818	2,526	2,431	3,343	491	8,791	994	1,291	1,084	856	4,225
(357)	(347)	(348)	(372)	(1,424)	(349)	(356)	(359)	(342)	(1,406)	(317)	(337)	(358)	(359)	(1,371)
4,927	5,551	5,222	3,694	19,394	2,177	2,075	2,984	149	7,385	677	954	726	497	2,854
(1,611)	(1,852)	(2,151)	(1,421)	(7,035)	449	(722)	(1,155)	30	(1,398)	(120)	(205)	164	(51)	(212)
3,316	3,699	3,071	2,273	12,359	2,626	1,353	1,829	179	5,987	557	749	890	446	2,642
3,225	3,635	3,037	2,239	12,136	2,577	1,313	1,819	196	5,905	532	720	933	400	2,585
91	64	34	34	223	49	40	10	(17)	82	25	29	(43)	46	57
3,316	3,699	3,071	2,273	12,359	2,626	1,353	1,829	179	5,987	557	749	890	446	2,642
17.45	19.71	16.51	12.28	66.00	14.14	7.17	9.92	1.06	32.22	2.88	3.85	4.96	2.11	13.79
1.05	1.18	0.99	0.74	3.96	0.85	0.43	0.60	0.06	1.93	0.17	0.23	0.30	0.13	0.83

Replacement cost profit (loss)* before interest and tax by segment and geographical area

	\$ million									
	Q1	Q2	Q3	Q4	2012	Q1	Q2	Q3	Q4	2013
By segment										
Upstream										
US	2,534	(1,584)	1,178	4,790	6,918	908	590	1,192	935	3,625
Non-US	4,449	4,497	3,729	2,898	15,573	4,654	3,810	2,966	1,602	13,032
	6,983	2,913	4,907	7,688	22,491	5,562	4,400	4,158	2,537	16,657
Downstream										
US	158	(1,984)	1,106	478	(242)	713	759	(86)	(628)	758
Non-US	701	252	1,302	851	3,106	934	257	702	268	2,161
	859	(1,732)	2,408	1,329	2,864	1,647	1,016	616	(360)	2,919
TNK-BP										
Non-US	1,064	452	1,282	575	3,373	12,500	–	–	–	12,500
	1,064	452	1,282	575	3,373	12,500	–	–	–	12,500
Rosneft										
Non-US	–	–	–	–	–	85	218	792	1,058	2,153
	–	–	–	–	–	85	218	792	1,058	2,153
Other businesses and corporate										
US ^a	(277)	(1,120)	(768)	(4,471)	(6,636)	(147)	(475)	(636)	(421)	(1,679)
Non-US	(364)	(245)	(384)	(160)	(1,153)	(342)	(297)	(68)	(363)	(1,070)
	(641)	(1,365)	(1,152)	(4,631)	(7,789)	(489)	(772)	(704)	(784)	(2,749)
	8,265	268	7,445	4,961	20,939	19,305	4,862	4,862	2,451	31,480
Consolidation adjustment – UPII*	(541)	457	(64)	(428)	(576)	427	129	263	(240)	579
Replacement cost profit (loss) before interest and tax	7,724	725	7,381	4,533	20,363	19,732	4,991	5,125	2,211	32,059
By geographical area										
US	1,935	(4,246)	1,422	1,069	180	1,727	1,156	530	(299)	3,114
Non-US	5,789	4,971	5,959	3,464	20,183	18,005	3,835	4,595	2,510	28,945
Replacement cost profit (loss) before interest and tax	7,724	725	7,381	4,533	20,363	19,732	4,991	5,125	2,211	32,059

^a Includes costs related to the Gulf of Mexico oil spill. See Gulf of Mexico oil spill section for further information.

Replacement cost profit (loss)* before interest and tax by segment and geographical area continued

														\$ million
Q1	Q2	Q3	Q4	2014	Q1	Q2	Q3	Q4	2015	Q1	Q2	Q3	Q4	2016
623	1,316	1,257	1,129	4,325	(616)	(256)	(265)	(1,146)	(2,283)	(863)	(419)	160	(400)	(1,522)
4,036	2,733	2,054	(4,214)	4,609	988	484	1,008	(1,134)	1,346	(342)	310	1,036	1,092	2,096
4,659	4,049	3,311	(3,085)	8,934	372	228	743	(2,280)	(937)	(1,205)	(109)	1,196	692	574
502	717	660	380	2,259	530	591	1,089	405	2,615	566	325	64	(471)	484
292	216	571	400	1,479	1,553	1,037	1,473	433	4,496	1,314	1,080	914	1,370	4,678
794	933	1,231	780	3,738	2,083	1,628	2,562	838	7,111	1,880	1,405	978	899	5,162
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
518	1,024	107	451	2,100	183	510	382	235	1,310	66	246	120	158	590
518	1,024	107	451	2,100	183	510	382	235	1,310	66	246	120	158	590
(129)	(473)	(279)	(854)	(1,735)	(386)	(10,901)	(564)	(731)	(12,582)	(958)	(5,245)	(275)	(622)	(7,100)
(397)	(212)	(186)	(261)	(1,056)	(245)	(301)	(125)	(224)	(895)	(116)	(280)	(166)	(495)	(1,057)
(526)	(685)	(465)	(1,115)	(2,791)	(631)	(11,202)	(689)	(955)	(13,477)	(1,074)	(5,525)	(441)	(1,117)	(8,157)
5,445	5,321	4,184	(2,969)	11,981	2,007	(8,836)	2,998	(2,162)	(5,993)	(333)	(3,983)	1,853	632	(1,831)
90	(76)	370	257	641	(129)	(39)	67	65	(36)	40	(121)	17	(132)	(196)
5,535	5,245	4,554	(2,712)	12,622	1,878	(8,875)	3,065	(2,097)	(6,029)	(293)	(4,104)	1,870	500	(2,027)
1,125	1,643	1,800	683	5,251	(497)	(10,641)	324	(1,429)	(12,243)	(1,256)	(5,394)	(15)	(1,646)	(8,311)
4,410	3,602	2,754	(3,395)	7,371	2,375	1,766	2,741	(668)	6,214	963	1,290	1,885	2,146	6,284
5,535	5,245	4,554	(2,712)	12,622	1,878	(8,875)	3,065	(2,097)	(6,029)	(293)	(4,104)	1,870	500	(2,027)

Underlying replacement cost profit (loss)* before interest and tax by segment and geographical area

	\$ million									
	Q1	Q2	Q3	Q4	2012	Q1	Q2	Q3	Q4	2013
By segment										
Upstream										
US	1,658	628	741	827	3,854	954	561	1,271	1,050	3,836
Non-US	4,636	3,773	3,625	3,548	15,582	4,748	3,727	3,152	2,802	14,429
	6,294	4,401	4,366	4,375	19,436	5,702	4,288	4,423	3,852	18,265
Downstream										
US	289	450	1,723	583	3,045	750	557	(22)	(162)	1,123
Non-US	638	683	1,286	811	3,418	891	644	742	232	2,509
	927	1,133	3,009	1,394	6,463	1,641	1,201	720	70	3,632
TNK-BP										
Non-US	1,157	452	1,294	224	3,127	–	–	–	–	–
	1,157	452	1,294	224	3,127	–	–	–	–	–
Rosneft										
Non-US	–	–	–	–	–	85	218	808	1,087	2,198
	–	–	–	–	–	85	218	808	1,087	2,198
Other businesses and corporate										
US	(165)	(185)	(218)	(291)	(859)	(121)	(142)	(309)	(228)	(800)
Non-US	(270)	(355)	(355)	(157)	(1,137)	(340)	(296)	(76)	(386)	(1,098)
	(435)	(540)	(573)	(448)	(1,996)	(461)	(438)	(385)	(614)	(1,898)
Consolidation adjustment – UPII*	(541)	457	(64)	(428)	(576)	427	129	263	(240)	579
Underlying replacement cost profit before interest and tax	7,402	5,903	8,032	5,117	26,454	7,394	5,398	5,829	4,155	22,776
By geographical area										
US	1,302	1,335	2,152	1,391	6,180	1,836	1,258	1,000	475	4,569
Non-US	6,100	4,568	5,880	3,726	20,274	5,558	4,140	4,829	3,680	18,207
Underlying replacement cost profit before interest and tax	7,402	5,903	8,032	5,117	26,454	7,394	5,398	5,829	4,155	22,776

Underlying replacement cost profit (loss)* before interest and tax by segment and geographical area continued

										\$ million				
Q1	Q2	Q3	Q4	2014	Q1	Q2	Q3	Q4	2015	Q1	Q2	Q3	Q4	2016
731	1,419	1,181	1,007	4,338	(545)	(66)	(152)	(852)	(1,615)	(667)	(305)	(151)	(147)	(1,270)
3,670	3,236	2,718	1,239	10,863	1,149	560	975	124	2,808	(80)	334	(73)	547	728
4,401	4,655	3,899	2,246	15,201	604	494	823	(728)	1,193	(747)	29	(224)	400	(542)
412	331	603	338	1,684	661	576	885	477	2,599	540	386	298	(371)	853
599	402	881	875	2,757	1,497	1,291	1,417	741	4,946	1,273	1,127	1,133	1,248	4,781
1,011	733	1,484	1,213	4,441	2,158	1,867	2,302	1,218	7,545	1,813	1,513	1,431	877	5,634
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
271	1,024	110	470	1,875	183	510	382	235	1,310	66	246	120	135	567
271	1,024	110	470	1,875	183	510	382	235	1,310	66	246	120	135	567
(99)	(226)	(102)	(167)	(594)	(62)	(144)	(126)	(107)	(439)	(110)	(109)	(107)	50	(276)
(390)	(212)	(191)	47	(746)	(228)	(257)	(105)	(192)	(782)	(68)	(267)	(153)	(474)	(962)
(489)	(438)	(293)	(120)	(1,340)	(290)	(401)	(231)	(299)	(1,221)	(178)	(376)	(260)	(424)	(1,238)
90	(76)	370	257	641	(129)	(39)	67	65	(36)	40	(121)	17	(132)	(196)
5,284	5,898	5,570	4,066	20,818	2,526	2,431	3,343	491	8,791	994	1,291	1,084	856	4,225
1,173	1,607	1,844	1,206	5,830	29	291	671	(439)	552	(238)	(83)	76	(621)	(866)
4,111	4,291	3,726	2,860	14,988	2,497	2,140	2,672	930	8,239	1,232	1,374	1,008	1,477	5,091
5,284	5,898	5,570	4,066	20,818	2,526	2,431	3,343	491	8,791	994	1,291	1,084	856	4,225

Non-operating items* by segment

	\$ million									
	Q1	Q2	Q3	Q4	2012	Q1	Q2	Q3	Q4	2013
Upstream										
Impairment and gain (loss) on sale of businesses and fixed assets ^a	928	(1,455)	492	3,673	3,638	(102)	65	(374)	(391)	(802)
Environmental and other provisions	—	—	(48)	—	(48)	—	—	(21)	1	(20)
Restructuring, integration and rationalization costs	—	—	—	—	—	—	—	—	—	—
Fair value gain (loss) on embedded derivatives	(100)	271	73	103	347	31	135	238	55	459
Other ^b	(6)	(311)	(1)	(430)	(748)	(9)	(57)	(69)	(866)	(1,001)
	822	(1,495)	516	3,346	3,189	(80)	143	(226)	(1,201)	(1,364)
Downstream										
Impairment and gain (loss) on sale of businesses and fixed assets ^c	(85)	(2,653)	(115)	(81)	(2,934)	34	(310)	(11)	(61)	(348)
Environmental and other provisions	—	—	(171)	—	(171)	(9)	—	(132)	7	(134)
Restructuring, integration and rationalization costs	(12)	(12)	(21)	13	(32)	(2)	(2)	—	(11)	(15)
Fair value gain (loss) on embedded derivatives	—	—	—	—	—	—	—	—	—	—
Other	(9)	(13)	(8)	(5)	(35)	(4)	(11)	(14)	(9)	(38)
	(106)	(2,678)	(315)	(73)	(3,172)	19	(323)	(157)	(74)	(535)
TNK-BP										
Impairment and gain (loss) on sale of businesses and fixed assets ^d	(93)	—	38	—	(55)	12,500	—	—	—	12,500
Environmental and other provisions	—	—	(50)	(33)	(83)	—	—	—	—	—
Restructuring, integration and rationalization costs	—	—	—	—	—	—	—	—	—	—
Fair value gain (loss) on embedded derivatives	—	—	—	—	—	—	—	—	—	—
Other ^e	—	—	—	384	384	—	—	—	—	—
	(93)	—	(12)	351	246	12,500	—	—	—	12,500
Rosneft										
Impairment and gain (loss) on sale of businesses and fixed assets	—	—	—	—	—	—	—	(16)	(19)	(35)
Environmental and other provisions	—	—	—	—	—	—	—	—	(10)	(10)
Restructuring, integration and rationalization costs	—	—	—	—	—	—	—	—	—	—
Fair value gain (loss) on embedded derivatives	—	—	—	—	—	—	—	—	—	—
Other	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	(16)	(29)	(45)
Other businesses and corporate										
Impairment and gain (loss) on sale of businesses and fixed assets	(50)	29	(253)	(8)	(282)	(1)	(129)	(87)	21	(196)
Environmental and other provisions	(15)	—	(246)	—	(261)	—	(6)	(216)	(19)	(241)
Restructuring, integration and rationalization costs	—	(1)	—	(14)	(15)	(2)	—	(4)	3	(3)
Fair value gain (loss) on embedded derivatives	1	(1)	(1)	1	—	—	—	—	—	—
Gulf of Mexico oil spill ^f	30	(843)	(56)	(4,126)	(4,995)	(22)	(199)	(30)	(179)	(430)
Other ^g	(172)	(9)	(23)	(36)	(240)	(3)	—	18	4	19
	(206)	(825)	(579)	(4,183)	(5,793)	(28)	(334)	(319)	(170)	(851)
Total before interest and taxation	417	(4,998)	(390)	(559)	(5,530)	12,411	(514)	(718)	(1,474)	9,705
Finance costs ^h	(6)	(4)	(3)	(6)	(19)	(10)	(10)	(9)	(10)	(39)
Total before taxation	411	(5,002)	(393)	(565)	(5,549)	12,401	(524)	(727)	(1,484)	9,666
Taxation credit (charge)	(226)	1,663	72	(1,258)	251	23	158	205	481	867
Total after taxation for period	185	(3,339)	(321)	(1,823)	(5,298)	12,424	(366)	(522)	(1,003)	10,533

^a Fourth quarter 2016 includes a net impairment reversal of \$442 million, comprising impairment reversals of \$781 million offset by impairment charges of \$339 million. The impairment reversals include \$234 million relating to assets in India, with the recoverable amount calculated on a fair value basis.
Third quarter 2016 includes a net impairment reversal of \$1,465 million, comprising impairment reversals of \$2,038 million offset by impairment charges of \$573 million. The impairment reversals relate predominantly to assets in Angola and the North Sea, for which the recoverable amounts were calculated on a value-in-use basis.
Fourth quarter 2015 includes net impairment losses of \$1,023 million, with the largest charges relating to assets in Angola and North Sea.
Third quarter 2014 includes a \$395-million impairment relating to Block KG D6 in India.
Fourth quarter 2014 includes impairment charges of \$4,518 million for the North Sea and \$968 million for Angola.

^b Fourth quarter 2016 includes the write-off of \$147 million in relation to the value ascribed to licences in the deepwater Gulf of Mexico as part of the accounting for the acquisition of upstream assets from Devon Energy in 2011. Also included is a \$319-million reversal relating to Block KG D6 in India.
Third quarter 2016 includes the write-off of \$334 million in relation to the value ascribed to the BM-C-34 licence in Brazil as part of the accounting for the acquisition of upstream assets from Devon Energy in 2011.
First quarter 2016 and fourth quarter 2015 principally relate to BP's share of impairment losses recognized by equity-accounted entities.
Third quarter and fourth quarter 2014 include write-offs of \$375 million and \$20 million respectively relating to Block KG D6 in India.
Fourth quarter 2013 includes \$845 million relating to the value ascribed to block BM-CAL-13 offshore Brazil, following the acquisition of upstream assets from Devon Energy in 2011, which was written off as a result of the Pitanga exploration well not encountering commercial quantities of oil or gas.
Fourth quarter 2012 includes \$370 million relating to onerous gas marketing and trading contracts.

^c Second quarter 2012 includes impairment charges of \$2,665 million in the fuels business, mainly relating to Texas City refinery and Carson refinery and their associated assets.

^d First quarter 2013 reflects the gain on disposal of BP's interest in TNK-BP.

^e Fourth quarter 2012 includes dividend income of \$709 million, partly offset by a charge of \$325 million to settle disputes with Alfa, Access and Renova.

^f Includes costs relating to the Gulf of Mexico oil spill. See Gulf of Mexico oil spill section for further information.

^g Fourth quarter 2015 principally relates to BP's share of impairment losses recognized by equity-accounted entities.

First quarter, second quarter, third quarter and fourth quarter 2012 include charges of \$161 million, \$10 million, \$20 million and \$53 million respectively relating to our exit from the solar business.

Non-operating items* by segment continued

										\$ million				
Q1	Q2	Q3	Q4	2014	Q1	Q2	Q3	Q4	2015	Q1	Q2	Q3	Q4	2016
(116)	(527)	(248)	(5,685)	(6,576)	(113)	(194)	(44)	(853)	(1,204)	4	–	1,908	479	2,391
–	–	(59)	(1)	(60)	11	–	(35)	–	(24)	–	–	(8)	–	(8)
–	–	–	(100)	(100)	(181)	(67)	(92)	(70)	(410)	(263)	(3)	(36)	(71)	(373)
98	32	113	187	430	41	21	40	18	120	13	28	8	(17)	32
294	(21)	(307)	42	8	–	4	13	(734)	(717)	(109)	(18)	(407)	245	(289)
276	(516)	(501)	(5,557)	(6,298)	(242)	(236)	(118)	(1,639)	(2,235)	(355)	7	1,465	636	1,753
(255)	79	(400)	(614)	(1,190)	66	68	182	(185)	131	321	23	(11)	72	405
–	–	(128)	(5)	(133)	–	(7)	(92)	(9)	(108)	–	(3)	(72)	2	(73)
(1)	(1)	(5)	(158)	(165)	(28)	(182)	(46)	(351)	(607)	(35)	(54)	(108)	(103)	(300)
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
(22)	(28)	(19)	(13)	(82)	(1)	(1)	(1)	(3)	(6)	–	(3)	(5)	(48)	(56)
(278)	50	(552)	(790)	(1,570)	37	(122)	43	(548)	(590)	286	(37)	(196)	(77)	(24)
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
247	–	(3)	(19)	225	–	–	–	–	–	–	–	–	62	62
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	(39)	(39)
247	–	(3)	(19)	225	–	–	–	–	–	–	–	–	23	23
(6)	4	6	(308)	(304)	(12)	(27)	(11)	(120)	(170)	–	4	(6)	2	–
–	–	(145)	(35)	(180)	–	(4)	(123)	(24)	(151)	–	(35)	(99)	–	(134)
(1)	–	–	(175)	(176)	(6)	(23)	(13)	(29)	(71)	(48)	(11)	(10)	(21)	(90)
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
(29)	(251)	(33)	(468)	(781)	(323)	(10,747)	(311)	(328)	(11,709)	(794)	(5,106)	(66)	(674)	(6,640)
(1)	–	–	(9)	(10)	–	–	–	(155)	(155)	(54)	(1)	–	–	(55)
(37)	(247)	(172)	(995)	(1,451)	(341)	(10,801)	(458)	(656)	(12,256)	(896)	(5,149)	(181)	(693)	(6,919)
208	(713)	(1,228)	(7,361)	(9,094)	(546)	(11,159)	(533)	(2,843)	(15,081)	(965)	(5,179)	1,088	(111)	(5,167)
(10)	(9)	(10)	(9)	(38)	(9)	(8)	(115)	(115)	(247)	(123)	(123)	(123)	(125)	(494)
198	(722)	(1,238)	(7,370)	(9,132)	(555)	(11,167)	(648)	(2,958)	(15,328)	(1,088)	(5,302)	965	(236)	(5,661)
26	241	440	3,805	4,512	142	3,681	(108)	341	4,056	310	2,483	(16)	56	2,833
224	(481)	(798)	(3,565)	(4,620)	(413)	(7,486)	(756)	(2,617)	(11,272)	(778)	(2,819)	949	(180)	(2,828)

Non-operating items* by geographical area

	\$ million									
	Q1	Q2	Q3	Q4	2012	Q1	Q2	Q3	Q4	2013
Upstream										
US	947	(2,273)	465	3,992	3,131	(6)	62	5	(3)	58
Non-US ^a	(125)	778	51	(646)	58	(74)	81	(231)	(1,198)	(1,422)
	822	(1,495)	516	3,346	3,189	(80)	143	(226)	(1,201)	(1,364)
Downstream										
US ^b	(88)	(2,433)	(229)	(96)	(2,846)	28	(17)	(145)	(20)	(154)
Non-US	(18)	(245)	(86)	23	(326)	(9)	(306)	(12)	(54)	(381)
	(106)	(2,678)	(315)	(73)	(3,172)	19	(323)	(157)	(74)	(535)
TNK-BP										
US	–	–	–	–	–	–	–	–	–	–
Non-US ^c	(93)	–	(12)	351	246	12,500	–	–	–	12,500
	(93)	–	(12)	351	246	12,500	–	–	–	12,500
Rosneft										
US	–	–	–	–	–	–	–	–	–	–
Non-US	–	–	–	–	–	–	–	(16)	(29)	(45)
	–	–	–	–	–	–	–	(16)	(29)	(45)
Other businesses and corporate										
US ^d	(112)	(935)	(550)	(4,180)	(5,777)	(26)	(333)	(327)	(193)	(879)
Non-US	(94)	110	(29)	(3)	(16)	(2)	(1)	8	23	28
	(206)	(825)	(579)	(4,183)	(5,793)	(28)	(334)	(319)	(170)	(851)
Total before interest and taxation	417	(4,998)	(390)	(559)	(5,530)	12,411	(514)	(718)	(1,474)	9,705
Finance costs ^d	(6)	(4)	(3)	(6)	(19)	(10)	(10)	(9)	(10)	(39)
Total before taxation	411	(5,002)	(393)	(565)	(5,549)	12,401	(524)	(727)	(1,484)	9,666
Taxation credit (charge)	(226)	1,663	72	(1,258)	251	23	158	205	481	867
Total after taxation for period	185	(3,339)	(321)	(1,823)	(5,298)	12,424	(366)	(522)	(1,003)	10,533

^a Fourth quarter 2016 includes a \$234-million impairment reversal and a \$319-million write back of exploration costs relating to Block KG D6 in India. It also includes a write-off of \$147 million in relation to the value ascribed to licences in the deepwater Gulf of Mexico as part of the accounting for the acquisition of upstream assets from Devon Energy in 2011.

Third quarter 2016 includes a net impairment reversal of \$1,465 million, comprising impairment reversals of \$2,038 million offset by impairment charges of \$573 million. The impairment reversals relate predominantly to assets in Angola and the North Sea.

Third quarter 2016 also includes the write-off of \$334 million in relation to the value ascribed to the BM-C-34 licence in Brazil as part of the accounting for the acquisition of upstream assets from Devon Energy in 2011.

Fourth quarter 2015 includes net impairment losses of \$1,023 million and BP's share of impairment losses recognized by equity-accounted entities, with the largest charges relating to assets in Angola and North Sea.

Full year 2015 also includes a \$423-million write-off in Libya.

Fourth quarter 2014 includes impairment charges of \$4,518 million for the North Sea and \$968 million for Angola.

Third quarter and fourth quarter 2014 include write-offs of \$375 million and \$20 million respectively relating to Block KG D6 in India. This is classified in the 'other' category of non-operating items. In addition, impairment charges of \$395 million and \$20 million for the same periods were also recorded in relation to this block.

Fourth quarter and full year 2013 include an \$845-million write-off relating to the value ascribed to block BM-CAL-13 offshore Brazil as part of the accounting for the acquisition of upstream assets from Devon Energy in 2011 which was written off as a result of the Pitanga exploration well not encountering commercial quantities of oil or gas. The \$845-million write-off is classified in the 'other' category of non-operating items.

^b Second quarter 2012 includes impairment charges of \$2,665 million in the fuels business, mainly relating to Texas City refinery and Carson refinery and their associated assets.

^c Fourth quarter 2012 includes dividend income of \$709 million, partly offset by a charge of \$325 million to settle disputes with Alfa, Access and Renova.

First quarter 2013 reflects the gain on disposal of BP's interest in TNK-BP.

^d Includes costs relating to the Gulf of Mexico oil spill. See Gulf of Mexico oil spill section for further information.

Non-operating items* by geographical area continued

										\$ million				
Q1	Q2	Q3	Q4	2014	Q1	Q2	Q3	Q4	2015	Q1	Q2	Q3	Q4	2016
(59)	(72)	125	(30)	(36)	(68)	(135)	(139)	(260)	(602)	(163)	(57)	326	21	127
335	(444)	(626)	(5,527)	(6,262)	(174)	(101)	21	(1,379)	(1,633)	(192)	64	1,139	615	1,626
276	(516)	(501)	(5,557)	(6,298)	(242)	(236)	(118)	(1,639)	(2,235)	(355)	7	1,465	636	1,753
(1)	180	(181)	(337)	(339)	(4)	63	51	(196)	(86)	113	17	(56)	(122)	(48)
(277)	(130)	(371)	(453)	(1,231)	41	(185)	(8)	(352)	(504)	173	(54)	(140)	45	24
(278)	50	(552)	(790)	(1,570)	37	(122)	43	(548)	(590)	286	(37)	(196)	(77)	(24)
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
247	–	(3)	(19)	225	–	–	–	–	–	–	–	–	23	23
247	–	(3)	(19)	225	–	–	–	–	–	–	–	–	23	23
(30)	(247)	(177)	(687)	(1,141)	(324)	(10,757)	(438)	(624)	(12,143)	(848)	(5,136)	(168)	(672)	(6,824)
(7)	–	5	(308)	(310)	(17)	(44)	(20)	(32)	(113)	(48)	(13)	(13)	(21)	(95)
(37)	(247)	(172)	(995)	(1,451)	(341)	(10,801)	(458)	(656)	(12,256)	(896)	(5,149)	(181)	(693)	(6,919)
208	(713)	(1,228)	(7,361)	(9,094)	(546)	(11,159)	(533)	(2,843)	(15,081)	(965)	(5,179)	1,088	(111)	(5,167)
(10)	(9)	(10)	(9)	(38)	(9)	(8)	(115)	(115)	(247)	(123)	(123)	(123)	(125)	(494)
198	(722)	(1,238)	(7,370)	(9,132)	(555)	(11,167)	(648)	(2,958)	(15,328)	(1,088)	(5,302)	965	(236)	(5,661)
26	241	440	3,805	4,512	142	3,681	(108)	341	4,056	310	2,483	(16)	56	2,833
224	(481)	(798)	(3,565)	(4,620)	(413)	(7,486)	(756)	(2,617)	(11,272)	(778)	(2,819)	949	(180)	(2,828)

Fair value accounting effects*

	\$ million									
	Q1	Q2	Q3	Q4	2012	Q1	Q2	Q3	Q4	2013
By segment										
Upstream	(133)	7	25	(33)	(134)	(60)	(31)	(39)	(114)	(244)
Downstream	38	(187)	(286)	8	(427)	(13)	138	53	(356)	(178)
	(95)	(180)	(261)	(25)	(561)	(73)	107	14	(470)	(422)
Taxation credit (charge)	40	72	99	5	216	30	(53)	(6)	171	142
	(55)	(108)	(162)	(20)	(345)	(43)	54	8	(299)	(280)
By geographical area										
Upstream										
US	(71)	61	(28)	(29)	(67)	(40)	(33)	(84)	(112)	(269)
Non-US	(62)	(54)	53	(4)	(67)	(20)	2	45	(2)	25
	(133)	7	25	(33)	(134)	(60)	(31)	(39)	(114)	(244)
Downstream										
US	(43)	(1)	(388)	(9)	(441)	(65)	219	81	(446)	(211)
Non-US	81	(186)	102	17	14	52	(81)	(28)	90	33
	38	(187)	(286)	8	(427)	(13)	138	53	(356)	(178)

Total of non-operating items* and fair value accounting effects*

	\$ million									
	Q1	Q2	Q3	Q4	2012	Q1	Q2	Q3	Q4	2013
Upstream										
US	876	(2,212)	437	3,963	3,064	(46)	29	(79)	(115)	(211)
Non-US ^a	(187)	724	104	(650)	(9)	(94)	83	(186)	(1,200)	(1,397)
	689	(1,488)	541	3,313	3,055	(140)	112	(265)	(1,315)	(1,608)
Downstream										
US ^b	(131)	(2,434)	(617)	(105)	(3,287)	(37)	202	(64)	(466)	(365)
Non-US	63	(431)	16	40	(312)	43	(387)	(40)	36	(348)
	(68)	(2,865)	(601)	(65)	(3,599)	6	(185)	(104)	(430)	(713)
TNK-BP										
US	–	–	–	–	–	–	–	–	–	–
Non-US ^c	(93)	–	(12)	351	246	12,500	–	–	–	12,500
	(93)	–	(12)	351	246	12,500	–	–	–	12,500
Rosneft										
US	–	–	–	–	–	–	–	–	–	–
Non-US	–	–	–	–	–	–	–	(16)	(29)	(45)
	–	–	–	–	–	–	–	(16)	(29)	(45)
Other businesses and corporate										
US ^d	(112)	(935)	(550)	(4,180)	(5,777)	(26)	(333)	(327)	(193)	(879)
Non-US	(94)	110	(29)	(3)	(16)	(2)	(1)	8	23	28
	(206)	(825)	(579)	(4,183)	(5,793)	(28)	(334)	(319)	(170)	(851)
Total before interest and taxation	322	(5,178)	(651)	(584)	(6,091)	12,338	(407)	(704)	(1,944)	9,283
Finance costs^d	(6)	(4)	(3)	(6)	(19)	(10)	(10)	(9)	(10)	(39)
Total before taxation	316	(5,182)	(654)	(590)	(6,110)	12,328	(417)	(713)	(1,954)	9,244
Taxation credit (charge)	(186)	1,735	171	(1,253)	467	53	105	199	652	1,009
Total after taxation for period	130	(3,447)	(483)	(1,843)	(5,643)	12,381	(312)	(514)	(1,302)	10,253

^a Fourth quarter 2016 includes a \$234-million impairment reversal and a \$319-million write back of exploration costs relating to Block KG D6 in India. It also includes a write-off of \$147 million in relation to the value ascribed to licences in the deepwater Gulf of Mexico as part of the accounting for the acquisition of upstream assets from Devon Energy in 2011.

Third quarter 2016 includes a net impairment reversal of \$1,465 million, comprising impairment reversals of \$2,038 million offset by impairment charges of \$573 million. The impairment reversals relate predominantly to assets in Angola and the North Sea.

Third quarter 2016 also includes the write-off of \$334 million in relation to the value ascribed to the BM-C-34 licence in Brazil as part of the accounting for the acquisition of upstream assets from Devon Energy in 2011.

Fourth quarter 2015 includes net impairment losses of \$1,023 million and BP's share of impairment losses recognized by equity-accounted entities, with the largest charges relating to assets in Angola and North Sea.

Full year 2015 also includes a \$423-million write-off in Libya.

Fourth quarter 2014 includes impairment charges of \$4,518 million for the North Sea and \$968 million for Angola.

Third quarter and fourth quarter 2014 include write-offs of \$375 million and \$20 million respectively relating to Block KG D6 in India. This is classified in the 'other' category of non-operating items. In addition, impairment charges of \$395 million and \$20 million for the same periods were also recorded in relation to this block.

Fourth quarter and full year 2013 include an \$845-million write-off relating to the value ascribed to block BM-CAL-13 offshore Brazil as part of the accounting for the acquisition of upstream assets from Devon Energy in 2011 which was written off as a result of the Pitanga exploration well not encountering commercial quantities of oil or gas. The \$845-million write-off is classified in the 'other' category of non-operating items.

^b Second quarter 2012 includes impairment charges of \$2,665 million in the fuels business, mainly relating to Texas City refinery and Carson refinery and their associated assets.

^c Fourth quarter 2012 includes dividend income of \$709 million, partly offset by a charge of \$325 million to settle disputes with Alfa, Access and Renova.

First quarter 2013 reflects the gain on disposal of BP's interest in TNK-BP.

^d Includes costs relating to the Gulf of Mexico oil spill. See Gulf of Mexico oil spill section for further information.

Fair value accounting effects* continued

\$ million														
Q1	Q2	Q3	Q4	2014	Q1	Q2	Q3	Q4	2015	Q1	Q2	Q3	Q4	2016
(18)	(90)	(87)	226	31	10	(30)	38	87	105	(103)	(145)	(45)	(344)	(637)
61	150	299	357	867	(112)	(117)	217	168	156	(219)	(71)	(257)	99	(448)
43	60	212	583	898	(102)	(147)	255	255	261	(322)	(216)	(302)	(245)	(1,085)
(17)	(32)	(66)	(226)	(341)	41	54	(84)	(67)	(56)	83	68	81	97	329
26	28	146	357	557	(61)	(93)	171	188	205	(239)	(148)	(221)	(148)	(756)
														-
(49)	(31)	(49)	152	23	(3)	(55)	26	(34)	(66)	(33)	(57)	(15)	(274)	(379)
31	(59)	(38)	74	8	13	25	12	121	171	(70)	(88)	(30)	(70)	(258)
(18)	(90)	(87)	226	31	10	(30)	38	87	105	(103)	(145)	(45)	(344)	(637)
														-
91	206	238	379	914	(127)	(48)	153	124	102	(87)	(78)	(178)	22	(321)
(30)	(56)	61	(22)	(47)	15	(69)	64	44	54	(132)	7	(79)	77	(127)
61	150	299	357	867	(112)	(117)	217	168	156	(219)	(71)	(257)	99	(448)

Total of non-operating items* and fair value accounting effects* continued

\$ million														
Q1	Q2	Q3	Q4	2014	Q1	Q2	Q3	Q4	2015	Q1	Q2	Q3	Q4	2016
(108)	(103)	76	122	(13)	(71)	(190)	(113)	(294)	(668)	(196)	(114)	311	(253)	(252)
366	(503)	(664)	(5,453)	(6,254)	(161)	(76)	33	(1,258)	(1,462)	(262)	(24)	1,109	545	1,368
258	(606)	(588)	(5,331)	(6,267)	(232)	(266)	(80)	(1,552)	(2,130)	(458)	(138)	1,420	292	1,116
90	386	57	42	575	(131)	15	204	(72)	16	26	(61)	(234)	(100)	(369)
(307)	(186)	(310)	(475)	(1,278)	56	(254)	56	(308)	(450)	41	(47)	(219)	122	(103)
(217)	200	(253)	(433)	(703)	(75)	(239)	260	(380)	(434)	67	(108)	(453)	22	(472)
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
247	-	(3)	(19)	225	-	-	-	-	-	-	-	-	23	23
247	-	(3)	(19)	225	-	-	-	-	-	-	-	-	23	23
(30)	(247)	(177)	(687)	(1,141)	(324)	(10,757)	(438)	(624)	(12,143)	(848)	(5,136)	(168)	(672)	(6,824)
(7)	-	5	(308)	(310)	(17)	(44)	(20)	(32)	(113)	(48)	(13)	(13)	(21)	(95)
(37)	(247)	(172)	(995)	(1,451)	(341)	(10,801)	(458)	(656)	(12,256)	(896)	(5,149)	(181)	(693)	(6,919)
251	(653)	(1,016)	(6,778)	(8,196)	(648)	(11,306)	(278)	(2,588)	(14,820)	(1,287)	(5,395)	786	(356)	(6,252)
(10)	(9)	(10)	(9)	(38)	(9)	(8)	(115)	(115)	(247)	(123)	(123)	(123)	(125)	(494)
241	(662)	(1,026)	(6,787)	(8,234)	(657)	(11,314)	(393)	(2,703)	(15,067)	(1,410)	(5,518)	663	(481)	(6,746)
9	209	374	3,579	4,171	183	3,735	(192)	274	4,000	393	2,551	65	153	3,162
250	(453)	(652)	(3,208)	(4,063)	(474)	(7,579)	(585)	(2,429)	(11,067)	(1,017)	(2,967)	728	(328)	(3,584)

Gulf of Mexico oil spill

	\$ million									
	Q1	Q2	Q3	Q4	2012	Q1	Q2	Q3	Q4	2013
Income statement										
Production and manufacturing expenses	(30)	843	56	4,126	4,995	22	199	30	179	430
Profit (loss) before interest and taxation	30	(843)	(56)	(4,126)	(4,995)	(22)	(199)	(30)	(179)	(430)
Finance costs	6	4	3	6	19	10	10	9	10	39
Profit (loss) before taxation	24	(847)	(59)	(4,132)	(5,014)	(32)	(209)	(39)	(189)	(469)
Less: taxation	(26)	102	(51)	69	94	(5)	42	(44)	80	73
Profit (loss) for the period	(2)	(745)	(110)	(4,063)	(4,920)	(37)	(167)	(83)	(109)	(396)
Balance sheet										
Current assets										
Trade and other receivables	4,985	5,109	4,913	4,239	4,239	4,082	4,530	2,861	2,457	2,457
Prepayments	—	—	—	—	—	—	—	—	—	—
Current liabilities										
Trade and other payables	(3,800)	(2,377)	(1,118)	(522)	(522)	(1,082)	(1,063)	(1,029)	(1,030)	(1,030)
Accruals	—	—	—	—	—	—	—	—	—	—
Provisions	(5,877)	(6,177)	(6,181)	(5,449)	(5,449)	(4,810)	(5,183)	(3,457)	(2,951)	(2,951)
Net current liabilities	(4,692)	(3,445)	(2,386)	(1,732)	(1,732)	(1,810)	(1,716)	(1,625)	(1,524)	(1,524)
Non-current assets										
Trade and other receivables	4,881	4,181	4,754	2,264	2,264	2,074	2,067	2,286	2,442	2,442
Deferred tax assets	—	—	—	—	—	—	—	—	—	—
Non-current liabilities										
Other payables	—	—	—	(175)	(175)	(3,160)	(3,144)	(2,977)	(2,986)	(2,986)
Accruals	—	—	—	—	—	—	—	—	—	—
Provisions	(9,048)	(8,745)	(8,909)	(9,751)	(9,751)	(5,984)	(6,057)	(6,159)	(6,395)	(6,395)
Deferred tax	7,211	7,285	5,841	4,002	4,002	3,782	3,443	2,989	2,748	2,748
Net non-current assets (liabilities)	3,044	2,721	1,686	(3,660)	(3,660)	(3,288)	(3,691)	(3,861)	(4,191)	(4,191)
Net assets (liabilities)	(1,648)	(724)	(700)	(5,392)	(5,392)	(5,098)	(5,407)	(5,486)	(5,715)	(5,715)
Cash flow statement – operating activities										
Profit (loss) before taxation	24	(847)	(59)	(4,132)	(5,014)	(32)	(209)	(39)	(189)	(469)
Adjustments to reconcile profit (loss) before taxation to net cash provided by operating activities										
Net charge for interest and other finance expense, less net interest paid	6	4	3	6	19	10	10	9	10	39
Net charge for provisions, less payments	85	585	546	3,618	4,834	304	1,390	(576)	11	1,129
Movements in inventories and other current and non-current assets and liabilities	(1,861)	(1,439)	(2,017)	(771)	(6,088)	(828)	(1,430)	192	(33)	(2,099)
Pre-tax cash flows	(1,746)	(1,697)	(1,527)	(1,279)	(6,249)	(546)	(239)	(414)	(201)	(1,400)
Post-tax cash flows	(1,208)	(1,669)	(134)	629	(2,382)	(331)	142	(4)	120	(73)

Gulf of Mexico oil spill continued

										\$ million				
Q1	Q2	Q3	Q4	2014	Q1	Q2	Q3	Q4	2015	Q1	Q2	Q3	Q4	2016
29	251	33	468	781	323	10,747	311	328	11,709	794	5,106	66	674	6,640
(29)	(251)	(33)	(468)	(781)	(323)	(10,747)	(311)	(328)	(11,709)	(794)	(5,106)	(66)	(674)	(6,640)
10	9	10	9	38	9	8	115	115	247	123	123	123	125	494
(39)	(260)	(43)	(477)	(819)	(332)	(10,755)	(426)	(443)	(11,956)	(917)	(5,229)	(189)	(799)	(7,134)
10	44	45	163	262	112	3,601	(87)	(134)	3,492	251	2,533	53	268	3,105
(29)	(216)	2	(314)	(557)	(220)	(7,154)	(513)	(577)	(8,464)	(666)	(2,696)	(136)	(531)	(4,029)
1,931	1,944	1,566	1,154	1,154	1,079	2,638	1,205	686	686	508	359	330	194	194
—	—	—	—	—	—	—	—	—	—	5	5	4	—	—
(887)	(838)	(653)	(655)	(655)	(724)	(817)	(797)	(693)	(693)	(2,137)	(2,813)	(1,979)	(3,056)	(3,056)
—	—	—	—	—	—	(40)	(40)	(40)	(40)	—	—	—	—	—
(2,375)	(2,345)	(1,942)	(1,702)	(1,702)	(1,562)	(3,569)	(2,523)	(3,076)	(3,076)	(1,980)	(3,427)	(3,348)	(2,330)	(2,330)
(1,331)	(1,239)	(1,029)	(1,203)	(1,203)	(1,207)	(1,788)	(2,155)	(3,123)	(3,123)	(3,604)	(5,876)	(4,993)	(5,192)	(5,192)
2,799	2,569	3,289	2,701	2,701	2,304	203	223	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	7,771	7,824	8,092	8,092
(2,404)	(2,397)	(2,406)	(2,412)	(2,412)	(2,098)	(2,077)	(2,068)	(2,057)	(2,057)	(14,096)	(13,268)	(13,293)	(13,522)	(13,522)
(161)	(170)	(166)	(169)	(169)	(154)	(190)	(187)	(186)	(186)	—	—	—	—	—
(6,701)	(6,653)	(7,328)	(6,903)	(6,903)	(6,472)	(14,424)	(14,304)	(13,431)	(13,431)	(889)	(3,063)	(1,784)	(112)	(112)
2,638	2,285	1,995	1,723	1,723	1,835	5,436	5,334	5,200	5,200	5,451	—	—	—	—
(3,829)	(4,366)	(4,616)	(5,060)	(5,060)	(4,585)	(11,052)	(11,002)	(10,474)	(10,474)	(9,534)	(8,560)	(7,253)	(5,542)	(5,542)
(5,160)	(5,605)	(5,645)	(6,263)	(6,263)	(5,792)	(12,840)	(13,157)	(13,597)	(13,597)	(13,138)	(14,436)	(12,246)	(10,734)	(10,734)
(39)	(260)	(43)	(477)	(819)	(332)	(10,755)	(426)	(443)	(11,956)	(917)	(5,229)	(189)	(799)	(7,134)
10	9	10	9	38	9	8	115	115	247	123	123	123	125	494
(97)	116	586	334	939	227	10,607	235	227	11,296	757	4,466	(494)	(376)	4,353
(578)	(33)	(846)	3	(1,454)	(595)	34	(135)	(36)	(732)	(1,088)	(971)	(1,766)	(993)	(4,818)
(704)	(168)	(293)	(131)	(1,296)	(691)	(106)	(211)	(137)	(1,145)	(1,125)	(1,611)	(2,326)	(2,043)	(7,105)
(584)	229	42	304	(9)	(691)	(106)	(196)	(137)	(1,130)	(1,125)	(1,398)	(2,326)	(2,043)	(6,892)

Sales and other operating revenues

	\$ million				
	2012	2013	2014	2015	2016
By segment					
Upstream	72,225	70,374	65,424	43,235	33,188
Downstream	346,391	351,195	323,486	200,569	167,683
Other businesses and corporate	1,985	1,805	1,989	2,048	1,667
	420,601	423,374	390,899	245,852	202,538
Less: sales and other operating revenues between segments					
Upstream	42,572	42,327	36,643	21,949	17,581
Downstream	1,365	1,045	(173)	68	1,291
Other businesses and corporate	899	866	861	941	658
	44,836	44,238	37,331	22,958	19,530
Third party sales and other operating revenues					
Upstream	29,653	28,047	28,781	21,286	15,607
Downstream	345,026	350,150	323,659	200,501	166,392
Other businesses and corporate	1,086	939	1,128	1,107	1,009
Total sales and other operating revenues	375,765	379,136	353,568	222,894	183,008
By geographical area					
US	138,304	137,539	132,310	78,281	68,772
Non-US	275,105	280,317	251,943	158,519	128,771
	413,409	417,856	384,253	236,800	197,543
Less: sales and other operating revenues between areas					
	37,644	38,720	30,685	13,906	14,535
	375,765	379,136	353,568	222,894	183,008

Production and similar taxes

	\$ million				
	2012	2013	2014	2015	2016
Production and similar taxes provided for					
US	1,472	1,112	690	215	155
Non-US	6,686	5,935	2,268	821	528
	8,158	7,047	2,958	1,036	683
Production and similar taxes paid					
US	1,585	1,194	739	141	144
Non-US	6,997	6,403	2,454	1,119	492
	8,582	7,597	3,193	1,260	636

Taxation

	\$ million				
	2012	2013	2014	2015	2016
Tax on profit (loss)					
Current tax charge	6,916	5,785	4,492	1,581	1,639
Deferred tax charge (credit)	(36)	678	(3,545)	(4,752)	(4,106)
Total tax on profit (loss)	6,880	6,463	947	(3,171)	(2,467)
Taxation (charge) credit on inventory holdings gains and losses	183	60	1,917	569	(483)
Tax on replacement cost profit (loss)	7,063	6,523	2,864	(2,602)	(2,950)
Effective tax rates on					
Replacement cost profit (loss)* for the year	38%	21%	26%	34%	76%
Profit (loss) for the year	38%	21%	19%	33%	107%
Income taxes paid	6,482	6,307	4,787	2,256	1,538

Depreciation, depletion and amortization

	\$ million				
	2012	2013	2014	2015	2016
By segment					
Upstream					
US	3,437	3,538	4,129	4,007	4,396
Non-US	6,918	7,514	8,404	8,866	7,835
	10,355	11,052	12,533	12,873	12,231
Downstream					
US	586	747	984	906	856
Non-US	1,343	1,343	1,336	1,162	1,094
	1,929	2,090	2,320	2,068	1,950
Other businesses and corporate					
US	213	181	97	77	71
Non-US	190	187	213	201	253
	403	368	310	278	324
	12,687	13,510	15,163	15,219	14,505
By geographical area					
US	4,236	4,466	5,210	4,990	5,323
Non-US	8,451	9,044	9,953	10,229	9,182
Total	12,687	13,510	15,163	15,219	14,505

Group balance sheet

At 31 December	\$ million				
	2012	2013	2014	2015	2016
Non-current assets					
Property, plant and equipment	125,331	133,690	130,692	129,758	129,757
Goodwill	12,190	12,181	11,868	11,627	11,194
Intangible assets	24,632	22,039	20,907	18,660	18,183
Investments in joint ventures	8,614	9,199	8,753	8,412	8,609
Investments in associates	2,998	16,636	10,403	9,422	14,092
Other investments	2,704	1,565	1,228	1,002	1,033
Fixed assets	176,469	195,310	183,851	178,881	182,868
Loans	642	763	659	529	532
Trade and other receivables	5,961	5,985	4,787	2,216	1,474
Derivative financial instruments	4,294	3,509	4,442	4,409	4,359
Prepayments	830	922	964	1,003	945
Deferred tax assets	874	985	2,309	1,545	4,741
Defined benefit pension plan surpluses	12	1,376	31	2,647	584
	189,082	208,850	197,043	191,230	195,503
Current assets					
Loans	247	216	333	272	259
Inventories	28,203	29,231	18,373	14,142	17,655
Trade and other receivables	37,611	39,831	31,038	22,323	20,675
Derivative financial instruments	4,507	2,675	5,165	4,242	3,016
Prepayments	1,091	1,388	1,424	1,838	1,486
Current tax receivable	456	512	837	599	1,194
Other investments	319	467	329	219	44
Cash and cash equivalents	19,635	22,520	29,763	26,389	23,484
	92,069	96,840	87,262	70,024	67,813
Assets classified as held for sale	19,315	–	–	578	–
	111,384	96,840	87,262	70,602	67,813
Total assets	300,466	305,690	284,305	261,832	263,316
Current liabilities					
Trade and other payables	46,673	47,159	40,118	31,949	37,915
Derivative financial instruments	2,658	2,322	3,689	3,239	2,991
Accruals	6,875	8,960	7,102	6,261	5,136
Finance debt	10,033	7,381	6,877	6,944	6,634
Current tax payable	2,503	1,945	2,011	1,080	1,666
Provisions	7,587	5,045	3,818	5,154	4,012
	76,329	72,812	63,615	54,627	58,354
Liabilities directly associated with assets classified as held for sale	846	–	–	97	–
	77,175	72,812	63,615	54,724	58,354
Non-current liabilities					
Other payables	2,292	4,756	3,587	2,910	13,946
Derivative financial instruments	2,723	2,225	3,199	4,283	5,513
Accruals	491	547	861	890	469
Finance debt	38,767	40,811	45,977	46,224	51,666
Deferred tax liabilities	15,243	17,439	13,893	9,599	7,238
Provisions	30,396	26,915	29,080	35,960	20,412
Defined benefit pension plan and other post-retirement benefit plan deficits	13,627	9,778	11,451	8,855	8,875
	103,539	102,471	108,048	108,721	108,119
Total liabilities	180,714	175,283	171,663	163,445	166,473
Net assets	119,752	130,407	112,642	98,387	96,843
Equity					
BP shareholders' equity	118,546	129,302	111,441	97,216	95,286
Non-controlling interests	1,206	1,105	1,201	1,171	1,557
Total equity	119,752	130,407	112,642	98,387	96,843

Operating capital employed^a

	\$ million				
	2012	2013	2014	2015	2016
By segment					
Upstream					
US	38,437	41,320	40,971	39,032	38,315
Non-US	70,387	70,567	66,553	68,165	74,058
	108,824	111,887	107,524	107,197	112,373
Downstream					
US	24,835	23,835	19,079	17,545	17,310
Non-US	25,488	25,680	19,799	17,390	16,597
	50,323	49,515	38,878	34,935	33,907
TNK-BP					
US	—	—	—	—	—
Non-US	13,607	—	—	—	—
	13,607	—	—	—	—
Rosneft					
US	—	—	—	—	—
Non-US	—	13,681	7,312	5,797	8,243
	—	13,681	7,312	5,797	8,243
Other businesses and corporate					
US ^b	(13,509)	(9,923)	(10,320)	(20,453)	(20,922)
Non-US	14,785	19,818	23,023	21,055	13,582
	1,276	9,895	12,703	602	(7,340)
Consolidation adjustment	(1,252)	(673)	(31)	(68)	(265)
	172,778	184,305	166,386	148,463	146,918
By geographical area					
US	49,418	54,988	49,723	36,124	34,531
Non-US	123,360	129,317	116,663	112,339	112,387
Total operating capital employed ^a	172,778	184,305	166,386	148,463	146,918
Liabilities for current and deferred taxation	(16,416)	(17,887)	(12,758)	(8,535)	(2,969)
Goodwill	12,190	12,181	11,868	11,627	11,194
Capital employed	168,552	178,599	165,496	151,555	155,143
Financed by					
Finance debt	48,800	48,192	52,854	53,168	58,300
Non-controlling interests	1,206	1,105	1,201	1,171	1,557
BP shareholders' equity	118,546	129,302	111,441	97,216	95,286
Capital employed	168,552	178,599	165,496	151,555	155,143

^a Operating capital employed is total assets (excluding goodwill) less total liabilities, excluding finance debt and current and deferred taxation.

^b All amounts relating to the Gulf of Mexico oil spill are included in Other businesses and corporate - US. See table below for breakdown.

Breakdown of Other businesses and corporate - US					
	2012	2013	2014	2015	2016
Operating capital employed					
Gulf of Mexico oil spill	(9,394)	(8,464)	(7,986)	(18,797)	(18,826)
Other	(4,115)	(1,459)	(2,334)	(1,656)	(2,096)
	(13,509)	(9,923)	(10,320)	(20,453)	(20,922)

Property, plant and equipment

	\$ million				
	2012	2013	2014	2015	2016
Net book amount by segment					
Upstream					
US	38,671	39,363	41,215	41,338	39,826
Non-US	53,303	58,972	56,535	58,077	60,336
	91,974	98,335	97,750	99,415	100,162
Downstream					
US	14,603	16,467	16,033	15,878	15,165
Non-US	15,320	15,131	13,647	12,056	12,388
	29,923	31,598	29,680	27,934	27,553
Other businesses and corporate					
US	1,683	1,532	822	667	620
Non-US	1,751	2,225	2,440	1,742	1,422
	3,434	3,757	3,262	2,409	2,042
Net book amount by geographical area					
US	54,957	57,362	58,070	57,883	55,611
Non-US	70,374	76,328	72,622	71,875	74,146
	125,331	133,690	130,692	129,758	129,757
Cost and accumulated depreciation					
Upstream					
Cost	190,645	206,882	220,991	236,001	235,961
Accumulated depreciation	(98,671)	(108,547)	(123,241)	(136,586)	(135,799)
	91,974	98,335	97,750	99,415	100,162
Downstream					
Cost	53,117	56,867	55,665	52,297	48,965
Accumulated depreciation	(23,194)	(25,269)	(25,985)	(24,363)	(21,412)
	29,923	31,598	29,680	27,934	27,553
Other businesses and corporate					
Cost	5,142	5,707	5,045	4,405	3,957
Accumulated depreciation	(1,708)	(1,950)	(1,783)	(1,996)	(1,915)
	3,434	3,757	3,262	2,409	2,042
Group					
Cost	248,904	269,456	281,701	292,703	288,883
Accumulated depreciation	(123,573)	(135,766)	(151,009)	(162,945)	(159,126)
	125,331	133,690	130,692	129,758	129,757

Analysis of inventories, receivables and payables

	\$ million				
	2012	2013	2014	2015	2016
Inventories					
Inventories	24,775	25,852	14,874	11,188	14,884
Supplies	2,428	2,735	3,051	2,626	2,388
	27,203	28,587	17,925	13,814	17,272
Trading inventories	1,000	644	448	328	383
	28,203	29,231	18,373	14,142	17,655
Current receivables					
Trade receivables	26,485	28,868	19,671	13,682	13,393
Amounts receivable from joint ventures	379	342	300	245	291
Amounts receivable from associates	492	871	1,258	1,058	765
Current tax receivable	456	512	837	599	1,194
Gulf of Mexico oil spill trust fund reimbursement asset	4,178	2,457	1,154	686	194
Other current receivables	12,241	12,039	15,906	13,223	10,837
	44,231	45,089	39,126	29,493	26,674
Non-current receivables					
Trade receivables	151	183	166	72	–
Amounts receivable from associates	102	47	–	–	–
Gulf of Mexico oil spill trust fund reimbursement asset	2,264	2,442	2,701	–	–
Other non-current receivables	9,210	8,507	7,985	8,085	7,310
	11,727	11,179	10,852	8,157	7,310
Current payables					
Trade payables	29,920	28,926	23,074	16,838	21,575
Amounts payable to joint ventures	133	51	129	104	120
Amounts payable to associates	972	3,525	2,307	2,026	2,000
Production and similar taxes	1,222	686	420	308	434
Current tax payable	2,503	1,945	2,011	1,080	1,666
Dividends	1	1	1	1	1
Gulf of Mexico oil spill trust fund liability	22	1	1	–	–
Other current payables	23,936	25,251	24,977	22,172	21,912
	58,709	60,386	52,920	42,529	47,708
Non-current payables					
Amounts payable to associates	102	47	–	–	–
Production and similar taxes	242	317	369	390	186
Other non-current payables	5,162	7,164	7,278	7,693	19,742
	5,506	7,528	7,647	8,083	19,928

Group cash flow statement

	\$ million				
	2012	2013	2014	2015	2016
Operating activities					
Profit (loss) before taxation ^a	18,131	30,221	4,950	(9,571)	(2,295)
Adjustments to reconcile profit (loss) before taxation to net cash provided by operating activities					
Exploration expenditure written off	745	2,710	3,029	1,829	1,274
Depreciation, depletion and amortization	12,687	13,510	15,163	15,219	14,505
Impairment and (gain) loss on sale of businesses and fixed assets	(422)	(11,154)	8,070	1,243	(2,796)
Earnings from joint ventures and associates	(3,935)	(3,189)	(3,372)	(1,811)	(1,960)
Dividends received from joint ventures and associates	1,763	1,391	1,911	1,614	1,105
Interest receivable	(379)	(314)	(276)	(247)	(200)
Interest received	175	173	81	176	267
Finance costs	1,072	1,068	1,148	1,347	1,675
Interest paid	(1,166)	(1,084)	(937)	(1,080)	(1,137)
Net finance expense relating to pensions and other post-retirement benefits	566	480	314	306	190
Share-based payments	156	297	379	321	779
Net operating charge for pensions and other post-retirement benefits, less contributions and benefit payments for unfunded plans	(858)	(920)	(963)	(592)	(467)
Net charge for provisions, less payments	5,338	1,061	1,119	11,792	4,487
(Increase) decrease in inventories	(1,720)	(1,193)	10,169	3,375	(3,681)
(Increase) decrease in other current and non-current assets	2,933	(2,718)	3,566	6,796	(1,172)
Increase (decrease) in other current and non-current liabilities	(8,125)	(2,932)	(6,810)	(9,328)	1,655
Income taxes paid	(6,482)	(6,307)	(4,787)	(2,256)	(1,538)
Net cash provided by operating activities	20,479	21,100	32,754	19,133	10,691
Investing activities					
Capital expenditure	(23,222)	(24,520)	(22,546)	(18,648)	(16,701)
Acquisitions, net of cash acquired	(116)	(67)	(131)	23	(1)
Investment in joint ventures	(1,526)	(451)	(179)	(265)	(50)
Investment in associates	(54)	(4,994)	(336)	(1,312)	(700)
Proceeds from disposals of fixed assets	9,992	18,115	1,820	1,066	1,372
Proceeds from disposals of businesses, net of cash disposed	1,606	3,884	1,671	1,726	1,259
Proceeds from loan repayments	245	178	127	110	68
Net cash used in investing activities	(13,075)	(7,855)	(19,574)	(17,300)	(14,753)
Financing activities					
Net issue (repurchase) of shares	122	(5,358)	(4,589)	–	–
Proceeds from long-term financing	11,087	8,814	12,394	8,173	12,442
Repayments of long-term financing	(7,177)	(5,959)	(6,282)	(6,426)	(6,685)
Net increase (decrease) in short-term debt	(666)	(2,019)	(693)	473	51
Net increase (decrease) in non-controlling interests	–	32	9	(5)	887
Dividends paid					
BP shareholders	(5,294)	(5,441)	(5,850)	(6,659)	(4,611)
Non-controlling interests	(82)	(469)	(255)	(91)	(107)
Net cash provided by (used in) financing activities	(2,010)	(10,400)	(5,266)	(4,535)	1,977
Currency translation differences relating to cash and cash equivalents	64	40	(671)	(672)	(820)
Increase (decrease) in cash and cash equivalents	5,458	2,885	7,243	(3,374)	(2,905)
Cash and cash equivalents at beginning of year	14,177	19,635	22,520	29,763	26,389
Cash and cash equivalents at end of year	19,635	22,520	29,763	26,389	23,484

^a 2012 included \$709 million of dividends received from TNK-BP.

Movement in net debt*

	\$ million				
	2012	2013	2014	2015	2016
Opening balance					
Finance debt	44,208	48,800	48,192	52,854	53,168
Fair value (asset) liability of hedges related to finance debt ^a	(1,133)	(1,700)	(477)	(445)	379
Less: cash and cash equivalents	14,177	19,635	22,520	29,763	26,389
Opening net debt	28,898	27,465	25,195	22,646	27,158
Closing balance					
Finance debt	48,800	48,192	52,854	53,168	58,300
Fair value (asset) liability of hedges related to finance debt ^a	(1,700)	(477)	(445)	379	697
Less: cash and cash equivalents	19,635	22,520	29,763	26,389	23,484
Closing net debt	27,465	25,195	22,646	27,158	35,513
Decrease (increase) in net debt	1,433	2,270	2,549	(4,512)	(8,355)
Movement in cash and cash equivalents (excluding exchange adjustments)	5,394	2,845	7,914	(2,702)	(2,085)
Net cash inflow from financing (excluding share capital)	(3,244)	(836)	(5,419)	(2,220)	(5,808)
Movement in finance debt relating to investing activities ^b	(602)	632	—	—	—
Other movements	(104)	(192)	(435)	17	278
Movement in net debt before exchange effects	1,444	2,449	2,060	(4,905)	(7,615)
Exchange adjustments	(11)	(179)	489	393	(740)
Decrease (increase) in net debt	1,433	2,270	2,549	(4,512)	(8,355)

^a Derivative financial instruments entered into for the purpose of managing interest rate and foreign currency exchange risk associated with net debt for which hedge accounting is not applied are not included in the calculation of net debt shown above. The fair value position of these instruments were as follows:

For 2016, first quarter liability of \$1,225 million, second quarter liability of \$1,440 million, third quarter liability of \$1,323 million and fourth quarter liability of \$1,962 million.

For 2015, first quarter liability of \$1,650 million, second quarter liability of \$1,357 million, third quarter liability of \$1,349 million and fourth quarter liability of \$1,617 million.

For 2014, first quarter asset of \$44 million, second quarter asset of \$1 million, third quarter liability of \$420 million and fourth quarter liability of \$774 million.

For 2013, fourth quarter asset of \$61 million.

^b Deposits of \$632 million were received in 2012, in respect of disposal transactions not completed at 31 December 2012 and \$30 million was repaid in respect of assets no longer held for sale.

Capital expenditure on an accruals basis*

	\$ million				
	2012	2013	2014	2015	2016
Capital expenditure on an accruals basis					
Organic capital expenditure ^a	23,950	24,600	22,892	18,748	18,440
Inorganic capital expenditure ^{a,b}	1,097	12,007	601	710	939
	25,047	36,607	23,493	19,458	19,379
Organic capital expenditure by segment					
Upstream					
US	5,397	6,410	5,931	4,518	2,989
Non-US	12,048	12,706	13,063	11,789	13,059
	17,445	19,116	18,994	16,307	16,048
Downstream					
US	3,467	2,535	942	702	784
Non-US	1,648	1,899	2,053	1,399	1,357
	5,115	4,434	2,995	2,101	2,141
Other businesses and corporate					
US	636	231	82	70	45
Non-US	754	819	821	270	206
	1,390	1,050	903	340	251
	23,950	24,600	22,892	18,748	18,440
Organic capital expenditure by geographical area					
US	9,500	9,176	6,955	5,290	3,818
Non-US	14,450	15,424	15,937	13,458	14,622
	23,950	24,600	22,892	18,748	18,440

^a 2016 includes amounts relating to the renewal of a 10% interest in the Abu Dhabi onshore oil concession for which new ordinary shares in BP were issued.

^b 2013 includes \$11,941 million relating to our investment in Rosneft.

Reconciliation of additions to non-current assets to capital expenditure on an accruals basis

	\$ million				
	2012	2013	2014	2015	2016
Additions to non-current assets^a	29,268	36,916	26,492	20,080	21,204
Additions to other investments	33	41	160	35	48
Elements of business combinations not related to non-current assets	(72)	39	(366)	(31)	(4)
(Additions to) reductions in decommissioning asset	(4,025)	(384)	(2,505)	(553)	656
Asset exchanges ^b	(157)	(5)	(288)	(73)	(2,525)
Capital expenditure on an accruals basis	25,047	36,607	23,493	19,458	19,379

^a Includes additions to property, plant and equipment; goodwill; intangible assets; investments in joint ventures; and investments in associates.

^b 2016 principally relates to the dissolution of the group's German refining joint operation with Rosneft and the contribution of BP's Norwegian Upstream business into Aker BP ASA in exchange for a 30% interest in Aker BP ASA.

Ratios

	\$ million				
	2012	2013	2014	2015	2016
Return on average capital employed (ROACE)*					
Profit (loss) for the year attributable to BP shareholders	11,017	23,451	3,780	(6,482)	115
Inventory holding (gains) losses, net of tax	411	230	4,293	1,320	(1,114)
Non-operating items and fair value accounting effects, net of tax	5,643	(10,253)	4,063	11,067	3,584
Underlying replacement cost profit	17,071	13,428	12,136	5,905	2,585
Interest expense, net of tax ^a	549	549	546	576	635
Non-controlling interests	234	307	223	82	57
Adjusted underlying replacement cost profit	17,854	14,284	12,905	6,563	3,277
Total equity	119,752	130,407	112,642	98,387	96,843
Gross debt	48,800	48,192	52,854	53,168	58,300
Capital employed (2016 average \$153,349 million)	168,552	178,599	165,496	151,555	155,143
Less: Goodwill	12,190	12,181	11,868	11,627	11,194
Cash and cash equivalents	19,635	22,520	29,763	26,389	23,484
Average capital employed (excluding goodwill and cash and cash equivalents)	136,727	143,898	123,865	113,539	120,465
ROACE	13.4%	10.2%	9.6%	5.5%	2.8%
Debt ratios					
Gross debt	48,800	48,192	52,854	53,168	58,300
Fair value (asset) liability of hedges related to finance debt ^b	(1,700)	(477)	(445)	379	697
	47,100	47,715	52,409	53,547	58,997
Less: cash and cash equivalents	19,635	22,520	29,763	26,389	23,484
Net debt*	27,465	25,195	22,646	27,158	35,513
Equity	119,752	130,407	112,642	98,387	96,843
Debt to debt-plus-equity ratio	28.2%	26.8%	31.8%	35.2%	37.9%
Debt to equity ratio	39.3%	36.6%	46.5%	54.4%	60.9%
Net debt to net debt-plus-equity ratio*	18.7%	16.2%	16.7%	21.6%	26.8%
Net debt to equity ratio	22.9%	19.3%	20.1%	27.6%	36.7%

^a Calculated on a post-tax basis using a notional tax rate of 35%.

^b Derivative financial instruments entered into for the purpose of managing interest rate and foreign currency exchange risk associated with net debt for which hedge accounting is not applied of net debt shown above. The fair value position of these instruments were as follows:

For 2016, first quarter liability of \$1,225 million, second quarter liability of \$1,440 million, third quarter liability of \$1,323 million and fourth quarter liability of \$1,962 million.

For 2015, first quarter liability of \$1,650 million, second quarter liability of \$1,357 million, third quarter liability of \$1,349 million and fourth quarter liability of \$1,617 million.

For 2014, first quarter asset of \$44 million, second quarter asset of \$1 million, third quarter liability of \$420 million and fourth quarter liability of \$774 million.

For 2013, fourth quarter asset of \$61 million.

Employee numbers

Number of employees at 31 December ^a	2012	2013	2014	2015	2016
By segment					
Upstream ^b	24,200	24,700	24,400	21,700	18,700
Downstream ^{b,c}	51,800	48,000	48,000	44,800	41,800
Other businesses and corporate ^{b,d,e}	10,400	11,200	12,100	13,300	14,000
	86,400	83,900	84,500	79,800	74,500
By geographical area					
US	23,400	19,600	18,500	16,400	14,400
Non-US ^c	63,000	64,300	66,000	63,400	60,100
	86,400	83,900	84,500	79,800	74,500

^a Reported to the nearest 100.

^b Around 800 centralized function employees were reallocated from Upstream and Downstream to Other businesses and corporate during 2016 and around 2,000 employees from the global business services organization were reallocated from Downstream to Other businesses and corporate during 2015.

^c 2016 includes 16,200 (2015 15,600, 2014 14,400, 2013 14,100 and 2012 14,700) service station staff. See page 75 for further information.

^d 2016 includes 4,600 (2015 4,800, 2014 5,300, 2013 4,300 and 2012 3,500) agricultural, operational and seasonal workers in Brazil.

^e Includes employees of the Gulf Coast Restoration Organization.

Information for earnings per share

	\$ million				
	2012	2013	2014	2015	2016
Results for the year					
Profit (loss) attributable to BP shareholders	11,017	23,451	3,780	(6,482)	115
Less: preference dividend	2	2	2	2	1
Profit (loss) attributable to BP ordinary shareholders	11,015	23,449	3,778	(6,484)	114
Profit (loss) attributable to BP ordinary shareholders, as above	11,015	23,449	3,778	(6,484)	114
Inventory holding (gains) losses, net of tax	411	230	4,293	1,320	(1,114)
Replacement cost profit (loss) attributable to BP ordinary shareholders	11,426	23,679	8,071	(5,164)	(999)
Number of shares^{ab}					
Basic weighted average number of shares outstanding (thousand)	19,027,929	18,931,021	18,385,458	18,323,646	18,744,800
ADS equivalent (thousand)	3,171,321	3,155,170	3,064,243	3,053,941	3,124,133
Diluted weighted average number of shares outstanding (thousand)	19,157,888	19,046,173	18,497,294	18,323,646	18,855,319
ADS equivalent (thousand)	3,192,981	3,174,362	3,082,882	3,053,941	3,142,553
Shares in issue at year end (thousand)	19,119,757	18,611,489	18,199,882	18,412,392	19,438,990
ADS equivalent (thousand)	3,186,626	3,101,914	3,033,313	3,068,732	3,239,831
Shares repurchased in the year (thousand) ^c	–	752,854	611,913	–	–

^a Excludes treasury shares and includes certain shares that will be issued in the future under employee share-based payment plans.

^b If the inclusion of potentially issuable shares would decrease loss per share, the potentially issuable shares are excluded from the weighted average number of shares outstanding used to calculate diluted earnings per share.

^c There were no shares repurchased in 2016 or 2015 (2014 shares were repurchased for a total consideration of \$4,796 million, including transaction costs of \$26 million and 2013 shares were repurchased for a total consideration of \$5,493 million, including transaction costs of \$30 million). All shares purchased were for cancellation.

BP shareholding information

Register of members holding BP ordinary shares as at 31 December 2016

Range of holdings	Number of ordinary shareholders	Percentage of total ordinary shareholders	Percentage of total ordinary share capital excluding shares held in treasury
1–200	54,634	21.81	0.01
201–1,000	86,631	34.58	0.24
1,001–10,000	97,136	38.78	1.55
10,001–100,000	10,729	4.28	1.12
100,001–1,000,000	731	0.29	1.44
Over 1,000,000 ^a	647	0.26	95.64
Totals	250,508	100.00	100.00

^a Includes JPMorgan Chase Bank, N.A. holding 28.31% of the total ordinary issued share capital (excluding shares held in treasury) as the approved depositary for ADSs, a breakdown of which is shown in the table below.

Register of holders of American depositary shares (ADSs) as at 31 December 2016^a

Range of holdings	Number of ADS holders	Percentage of total ADS holders	Percentage of total ADSs
1–200	52,478	58.76	0.31
201–1,000	23,687	26.52	1.23
1,001–10,000	12,532	14.03	3.55
10,001–100,000	618	0.69	1.11
100,001–1,000,000	8	0.00	0.15
Over 1,000,000 ^b	1	0.00	93.65
Totals	89,324	100.00	100.00

^a One ADS represents six 25-cent ordinary shares.

^b One holder of ADSs represents 1,006,596 underlying shareholders.

As at 31 December 2016, there were also 1,376 preference shareholders. Preference shareholders represented 0.43% and ordinary shareholders represented 99.57% of the total issued nominal share capital of the company (excluding shares held in treasury) as at that date.

Share ownership as at 31 December 2016^a

By principal area	Percentage of shares in issue
UK	31
US	41
Rest of Europe	12
Rest of world	12
Miscellaneous ^b	4
Totals	100

^a Represents BP's best efforts to determine ownership of the group's shares, based on analysis of the year-end share register.

^b Miscellaneous represents unidentified shares that are awaiting confirmation of the identity of the holder and the nature of their interest in the shares following enquiries made under Section 793 of the Companies Act 2006.

BP share data

	2012	2013	2014	2015	2016
Share price and dividends					
Share price (pence per ordinary share) ^a					
High	512.00	494.20	526.80	487.50	513.24
Low	388.56	426.50	364.40	319.90	309.10
End year	424.80	488.05	411.00	354.00	509.60
Dividends paid (pence per ordinary share)					
First quarter	5.0958	6.0013	5.7065	6.6699	7.0125
Second quarter	5.1498	5.8342	5.8071	6.5295	6.9167
Third quarter	5.0171	5.7630	5.9593	6.5488	7.5578
Fourth quarter	5.5890	5.8008	6.3769	6.6342	7.9313
	20.8517	23.3993	23.8498	26.3824	29.4183
Dividends paid (cents per ordinary share)					
First quarter	8.00	9.00	9.50	10.00	10.00
Second quarter	8.00	9.00	9.75	10.00	10.00
Third quarter	8.00	9.00	9.75	10.00	10.00
Fourth quarter	9.00	9.50	10.00	10.00	10.00
	33.00	36.50	39.00	40.00	40.00
ADS price (US dollars per ADS) ^a					
High	48.34	48.65	53.48	43.85	37.68
Low	36.25	39.99	34.88	29.35	27.01
End year	41.64	48.61	38.12	31.26	37.38
Dividends paid (US dollars per ADS)					
First quarter	0.480	0.540	0.570	0.600	0.600
Second quarter	0.480	0.540	0.585	0.600	0.600
Third quarter	0.480	0.540	0.585	0.600	0.600
Fourth quarter	0.540	0.570	0.600	0.600	0.600
	1.980	2.190	2.340	2.400	2.400
Ratios					
Dividend payout ratio ^b					
Based on replacement cost profit for the year ^c	55%	29%	89%	n/a	n/a
Based on profit for the year ^d	57%	29%	190%	n/a	n/a
Dividend cover ^b					
Dividend cover out of income ^{c e}	1.82	3.43	1.13	n/a	n/a
Dividend cover out of cash flow ^f	3.26	3.05	4.57	2.62	1.43
Dividend payout ratio ^g					
Based on replacement cost profit for the year ^c	46%	23%	72%	n/a	n/a
Based on profit for the year ^d	48%	23%	155%	n/a	n/a
Dividend cover ^g					
Dividend cover out of income ^{c e}	2.16	4.35	1.38	n/a	n/a
Dividend cover out of cash flow ^f	3.87	3.88	5.60	2.87	2.32

^a Derived from the highest and lowest intra-day sales prices as reported on the LSE and NYSE, respectively. Data source: Thomson Reuters Datastream.

^b The calculation is based on the assumption that all dividends, including scrip dividends, are paid in cash.

^c No ratio was calculated for 2016 and 2015 as there was a loss incurred on replacement cost profit for the year.

^d No ratio was calculated for 2015 as there was a loss incurred on profit for the year. The value for 2016 is not meaningful due to the low profit for the year.

^e Based on replacement cost profit for the year.

^f Net cash provided by operating activities, divided by gross dividends paid.

^g The calculation is based on the assumption that all dividends, excluding scrip dividends, are paid in cash.

Oil and natural gas exploration and production activities

	\$ million								
	2012								
	Europe		North America		South America	Africa	Asia	Australasia	Total
	UK	Rest of Europe	US	Rest of North America			Russia	Rest of Asia	
Subsidiaries									
Capitalized costs at 31 December^{a b c}									
Gross capitalized costs									
Proved properties	28,370	9,421	70,133	1,928	8,153	32,755	–	16,757	171,193
Unproved properties	400	199	7,084	2,244	3,590	4,524	–	4,920	24,501
	28,770	9,620	77,217	4,172	11,743	37,279	–	21,677	195,694
Accumulated depreciation	19,002	3,161	35,459	197	4,444	16,901	–	8,360	89,041
Net capitalized costs	9,768	6,459	41,758	3,975	7,299	20,378	–	13,317	106,653
Costs incurred for the year ended 31 December^{a b}									
Acquisition of properties ^{d e}									
Proved	–	–	256	–	51	–	–	–	307
Unproved	–	–	1,111	–	27	239	–	(68)	1,309
	–	–	1,367	–	78	239	–	(68)	1,616
Exploration and appraisal costs ^f	173	47	1,069	230	758	1,024	–	814	4,356
Development	1,907	784	3,866	611	581	2,992	–	1,591	12,553
Total costs	2,080	831	6,302	841	1,417	4,255	–	2,337	18,525
Results of operations for the year ended 31 December^g									
Sales and other operating revenues ^h									
Third parties	1,595	76	453	10	2,026	3,424	–	1,299	11,150
Sales between businesses	2,975	783	15,713	10	984	5,633	–	11,345	38,286
	4,570	859	16,166	20	3,010	9,057	–	12,644	49,436
Exploration expenditure	105	29	649	4	120	310	–	126	1,475
Production costs	1,310	348	3,854	71	812	1,323	–	1,076	8,985
Production taxes	92	–	1,472	–	162	–	–	6,291	8,158
Other costs (income) ⁱ	(1,474)	78	3,505	63	109	221	(330)	84	2,606
Depreciation, depletion and amortization	1,102	145	3,187	10	606	2,281	–	2,116	9,658
Impairments and (gains) losses on sale of businesses and fixed assets	373	83	(3,576)	98	6	24	–	(2)	(2,999)
	1,508	683	9,091	246	1,815	4,159	(330)	9,691	27,883
Profit (loss) before taxation^j	3,062	176	7,075	(226)	1,195	4,898	330	2,953	21,553
Allocable taxes	1,121	(313)	2,762	(67)	804	2,371	(13)	663	8,083
Results of operations	1,941	489	4,313	(159)	391	2,527	343	2,290	13,470
Upstream and TNK-BP segments replacement cost profit before interest and tax^k									
Exploration and production activities – subsidiaries (as above)	3,062	176	7,075	(226)	1,195	4,898	330	2,953	21,553
Midstream and other activities – subsidiaries ^k	(250)	(114)	(173)	774	163	(46)	11	32	407
Equity-accounted entities ^l	–	35	16	–	160	48	3,005	640	3,904
Total replacement cost profit before interest and tax	2,812	97	6,918	548	1,518	4,900	3,346	3,625	25,864

^a These tables contain information relating to oil and natural gas exploration and production activities of subsidiaries, which includes our share of oil and natural gas exploration and production activities of joint operations. They do not include any costs relating to the Gulf of Mexico oil spill. Amounts relating to the management and ownership of crude oil and natural gas pipelines, LNG liquefaction and transportation operations are excluded. In addition, our midstream activities of marketing and trading of natural gas, power and NGLs in the US, Canada, UK and Europe are excluded. The most significant midstream pipeline interests include the Trans-Alaska Pipeline System, the Forties Pipeline System, the Central Area Transmission System pipeline, the South Caucasus Pipeline and the Baku-Tbilisi-Ceyhan pipeline. Major LNG activities are located in Trinidad, Indonesia, Australia and Angola.

^b Decommissioning assets are included in capitalized costs at 31 December but are excluded from costs incurred for the year.

^c Excludes balances associated with assets held for sale.

^d Includes costs capitalized as a result of asset exchanges.

^e Excludes goodwill associated with business combinations.

^f Includes exploration and appraisal drilling expenditures, which are capitalized within intangible assets, and geological and geophysical exploration costs, which are charged to income as incurred.

^g Amendments have been made to previously published amounts for the Australasia region with no overall effect on total replacement cost profit before interest and tax.

^h Presented net of transportation costs, purchases and sales taxes.

ⁱ Includes property taxes, other government take and the fair value gain on embedded derivatives of \$347 million. The UK region includes a \$1,161 million gain offset by corresponding charges, primarily in the US region, relating to the group self-insurance programme. The Russia region, for which equity accounting ceased on 22 October 2012, includes a net non-operating gain of \$351 million, including dividend income of \$709 million partly offset by a settlement charge of \$325 million.

^j Excludes the unwinding of the discount on provisions and payables amounting to \$173 million which is included in finance costs in the group income statement.

^k Midstream and other activities excludes inventory holding gains and losses.

^l BP's share of the profits of equity-accounted entities are included after interest and tax reported by those entities.

Oil and natural gas exploration and production activities continued

	\$ million								
	2012								
	Europe		North America		South America	Africa	Asia	Australasia	Total
	UK	Rest of Europe	US	Rest of North America			Russia ^a	Rest of Asia ^b	
Equity-accounted entities (BP share)									
Capitalized costs at 31 December ^{c d}									
Gross capitalized costs									
Proved properties	–	–	–	–	6,958	–	–	4,036	10,994
Unproved properties	–	–	–	–	21	–	–	16	37
	–	–	–	–	6,979	–	–	4,052	11,031
Accumulated depreciation	–	–	–	–	2,965	–	–	3,648	6,613
Net capitalized costs	–	–	–	–	4,014	–	–	404	4,418
Costs incurred for the year ended 31 December ^{c d e}									
Acquisition of properties ^f									
Proved	–	–	–	–	–	–	4	–	4
Unproved	–	–	–	–	439	–	15	–	454
	–	–	–	–	439	–	19	–	458
Exploration and appraisal costs ^g	–	–	–	–	31	–	195	7	233
Development	–	–	–	–	599	–	1,560	404	2,563
Total costs	–	–	–	–	1,069	–	1,774	411	3,254
Results of operations for the year ended 31 December ^c									
Sales and other operating revenues ^h									
Third parties	–	–	–	–	2,267	–	6,472	4,245	12,984
Sales between businesses	–	–	–	–	–	–	3,639	21	3,660
	–	–	–	–	2,267	–	10,111	4,266	16,644
Exploration expenditure	–	–	–	–	31	–	93	1	125
Production costs	–	–	–	–	555	–	1,605	295	2,455
Production taxes	–	–	–	–	959	–	4,400	3,245	8,604
Other costs (income)	–	–	–	–	(11)	–	(24)	(2)	(37)
Depreciation, depletion and amortization	–	–	–	–	328	–	786	538	1,652
Net impairments and (gains) losses on sale of businesses and fixed assets	–	–	–	–	–	–	(27)	–	(27)
	–	–	–	–	1,862	–	6,833	4,077	12,772
Profit (loss) before taxation	–	–	–	–	405	–	3,278	189	3,872
Allocable taxes	–	–	–	–	294	–	536	54	884
Results of operations	–	–	–	–	111	–	2,742	135	2,988
Upstream and TNK-BP segments replacement cost profit before interest and tax from equity-accounted entities									
Exploration and production activities – equity-accounted entities after tax (as above)	–	–	–	–	111	–	2,742	135	2,988
Midstream and other activities after tax ⁱ	–	35	16	–	49	48	263	505	916
Total replacement cost profit after interest and tax	–	35	16	–	160	48	3,005	640	3,904

^a The Russia region includes BP's equity-accounted share of TNK-BP's earnings. For 2012, equity-accounted earnings are included until 21 October 2012 only, after which our investment was classified as an asset held for sale and therefore equity accounting ceased. The amounts shown exclude BP's share of costs incurred and results of operations for the period 22 October to 31 December 2012.

^b An amendment has been made to the amounts previously disclosed.

^c These tables contain information relating to oil and natural gas exploration and production activities of equity-accounted entities. They do not include amounts relating to assets held for sale. Amounts relating to the management and ownership of crude oil and natural gas pipelines, LNG liquefaction and transportation operations as well as downstream activities of TNK-BP are excluded. The amounts reported for equity-accounted entities exclude the corresponding amounts for their equity-accounted entities.

^d Decommissioning assets are included in capitalized costs at 31 December but are excluded from costs incurred for the year. Capitalized costs exclude balances associated with assets held for sale.

^e The amounts shown reflect BP's share of equity-accounted entities' costs incurred, and not the costs incurred by BP in acquiring an interest in equity-accounted entities.

^f Includes costs capitalized as a result of asset exchanges.

^g Includes exploration and appraisal drilling expenditures, which are capitalized within intangible assets, and geological and geophysical exploration costs, which are charged to income as incurred.

^h Presented net of transportation costs and sales taxes.

ⁱ Includes interest and adjustment for non-controlling interests. Excludes inventory holding gains and losses.

Oil and natural gas exploration and production activities continued

	\$ million								
	2013								
	Europe		North America		South America	Africa	Asia	Australasia	Total
	UK	Rest of Europe	US	Rest of North America			Russia	Rest of Asia	
Subsidiaries									
Capitalized costs at 31 December^{a b}									
Gross capitalized costs									
Proved properties	29,314	10,040	75,313	2,501	8,809	35,720	–	20,726	187,104
Unproved properties	316	195	6,816	2,408	3,366	5,079	–	2,756	21,741
	29,630	10,235	82,129	4,909	12,175	40,799	–	23,482	208,845
Accumulated depreciation	18,707	3,650	38,236	193	5,063	20,082	–	10,069	97,962
Net capitalized costs	10,923	6,585	43,893	4,716	7,112	20,717	–	13,413	110,883
Costs incurred for the year ended 31 December^{a b}									
Acquisition of properties									
Proved	–	–	1	–	7	–	–	–	8
Unproved	–	–	158	–	284	30	–	7	479
	–	–	159	–	291	30	–	7	487
Exploration and appraisal costs ^c	178	14	1,291	194	951	883	–	1,090	4,811
Development	1,942	455	4,877	569	683	2,755	–	2,082	13,552
Total costs	2,120	469	6,327	763	1,925	3,668	–	3,179	18,850
Results of operations for the year ended 31 December^d									
Sales and other operating revenues ^e									
Third parties	1,129	183	934	5	2,413	3,195	–	1,005	11,330
Sales between businesses	1,661	1,280	14,047	12	1,154	6,518	–	11,432	36,743
	2,790	1,463	14,981	17	3,567	9,713	–	12,437	48,073
Exploration expenditure	280	17	437	28	1,477	387	–	768	3,441
Production costs	1,102	430	3,691	42	892	1,623	–	1,091	9,058
Production taxes	(35)	–	1,112	–	184	–	–	5,660	7,047
Other costs (income) ^f	(1,731)	86	3,241	55	322	89	65	84	2,605
Depreciation, depletion and amortization	504	490	3,268	–	559	3,132	–	2,174	10,334
Net impairments and (gains) losses on sale of businesses and fixed assets	118	15	(80)	–	129	29	–	(16)	425
	238	1,038	11,669	125	3,563	5,260	65	9,761	32,910
Profit (loss) before taxation^g	2,552	425	3,312	(108)	4	4,453	(65)	2,676	15,163
Allocable taxes	554	475	1,204	(26)	642	1,925	(2)	682	6,299
Results of operations	1,998	(50)	2,108	(82)	(638)	2,528	(63)	1,994	8,864
Upstream, Rosneft and TNK-BP segments replacement cost profit before interest and tax^d									
Exploration and production activities – subsidiaries (as above)	2,552	425	3,312	(108)	4	4,453	(65)	2,676	15,163
Midstream and other activities – subsidiaries ^h	244	(40)	296	(14)	153	(154)	(4)	(29)	462
TNK-BP gain on sale	–	–	–	–	–	–	12,500	–	12,500
Equity-accounted entities ⁱ	–	28	17	–	405	24	2,158	553	3,185
Total replacement cost profit before interest and tax	2,796	413	3,625	(122)	562	4,323	14,589	3,200	31,310

^a These tables contain information relating to oil and natural gas exploration and production activities of subsidiaries, which includes our share of oil and natural gas exploration and production activities of joint operations. They do not include any costs relating to the Gulf of Mexico oil spill. Amounts relating to the management and ownership of crude oil and natural gas pipelines, LNG liquefaction and transportation operations are excluded. In addition, our midstream activities of marketing and trading of natural gas, power and NGLs in the US, Canada, UK and Europe are excluded. The most significant midstream pipeline interests include the Trans-Alaska Pipeline System, the Forties Pipeline System, the Central Area Transmission System pipeline, the South Caucasus Pipeline and the Baku-Tbilisi-Ceyhan pipeline. Major LNG activities are located in Trinidad, Indonesia, Australia and Angola.

^b Decommissioning assets are included in capitalized costs at 31 December but are excluded from costs incurred for the year.

^c Includes exploration and appraisal drilling expenditures, which are capitalized within intangible assets, and geological and geophysical exploration costs, which are charged to income as incurred.

^d Amendments have been made to previously published amounts for the Australasia region with no overall effect on total replacement cost profit before interest and tax.

^e Presented net of transportation costs, purchases and sales taxes.

^f Includes property taxes, other government take and the fair value gain on embedded derivatives of \$459 million. The UK region includes a \$1,055 million gain offset by corresponding charges, primarily in the US region, relating to the group self-insurance programme.

^g Excludes the unwinding of the discount on provisions and payables amounting to \$141 million which is included in finance costs in the group income statement.

^h Midstream and other activities excludes inventory holding gains and losses.

ⁱ BP's share of the profits of equity-accounted entities are included after interest and tax reported by those entities.

Oil and natural gas exploration and production activities continued

	\$ million								
	2013								
	Europe		North America		South America	Africa	Asia	Australasia	Total
	UK	Rest of Europe	US	Rest of North America			Russia ^a	Rest of Asia	
Equity-accounted entities (BP share)									
Capitalized costs at 31 December^{b c}									
Gross capitalized costs									
Proved properties	–	–	–	–	7,648	–	18,942	4,239	30,829
Unproved properties	–	–	–	–	29	–	638	21	688
Accumulated depreciation	–	–	–	–	3,282	–	1,077	4,061	8,420
Net capitalized costs	–	–	–	–	4,395	–	18,503	199	23,097
Costs incurred for the year ended 31 December^{b c d}									
Acquisition of properties									
Proved	–	–	–	–	–	–	1,816	–	1,816
Unproved	–	–	–	–	–	–	657	–	657
	–	–	–	–	–	–	2,473	–	2,473
Exploration and appraisal costs ^e	–	–	–	–	8	–	133	12	153
Development	–	–	–	–	714	–	1,860	423	2,997
Total costs	–	–	–	–	722	–	4,466	435	5,623
Results of operations for the year ended 31 December^{b f}									
Sales and other operating revenues ^g									
Third parties	–	–	–	–	2,294	–	435	4,591	7,320
Sales between businesses	–	–	–	–	–	–	9,679	14	9,693
	–	–	–	–	2,294	–	10,114	4,605	17,013
Exploration expenditure	–	–	–	–	–	–	126	1	127
Production costs	–	–	–	–	586	–	1,177	382	2,145
Production taxes	–	–	–	–	630	–	4,511	3,383	8,524
Other costs (income)	–	–	–	–	6	–	94	–	100
Depreciation, depletion and amortization	–	–	–	–	317	–	1,232	648	2,197
Net impairments and losses on sale of businesses and fixed assets	–	–	–	–	–	–	37	–	37
	–	–	–	–	1,539	–	7,177	4,414	13,130
Profit (loss) before taxation	–	–	–	–	755	–	2,937	191	3,883
Allocable taxes	–	–	–	–	460	–	367	40	867
Results of operations	–	–	–	–	295	–	2,570	151	3,016
Upstream, Rosneft and TNK-BP segments replacement cost profit before interest and tax from equity-accounted entities									
Exploration and production activities – equity-accounted entities after tax (as above)	–	–	–	–	295	–	2,570	151	3,016
Midstream and other activities after tax ^h	–	28	17	–	110	24	(412)	402	169
Total replacement cost profit after interest and tax	–	28	17	–	405	24	2,158	553	3,185

^a Amounts reported for Russia include BP's share of Rosneft's worldwide activities, including insignificant amounts outside Russia.

^b These tables contain information relating to oil and natural gas exploration and production activities of equity-accounted entities. They do not include amounts relating to assets held for sale. Amounts relating to the management and ownership of crude oil and natural gas pipelines, LNG liquefaction and transportation operations as well as downstream activities of TNK-BP and Rosneft are excluded. The amounts reported for equity-accounted entities exclude the corresponding amounts for their equity-accounted entities.

^c Decommissioning assets are included in capitalized costs at 31 December but are excluded from costs incurred for the year.

^d The amounts shown reflect BP's share of equity-accounted entities' costs incurred, and not the costs incurred by BP in acquiring an interest in equity-accounted entities.

^e Includes exploration and appraisal drilling expenditures, which are capitalized within intangible assets, and geological and geophysical exploration costs, which are charged to income as incurred.

^f Amendments have been made to previously published numbers for the Rest of Asia region. The amendments had no overall effect on results of operations.

^g Presented net of transportation costs and sales taxes.

^h Includes interest and adjustment for non-controlling interests. Excludes inventory holding gains and losses.

Oil and natural gas exploration and production activities continued

	\$ million								
	Europe		North America		South America	Africa	Asia	Australasia	2014 Total
	UK	Rest of Europe	US	Rest of North America			Russia	Rest of Asia	
Subsidiaries									
Capitalized costs at 31 December^{a b}									
Gross capitalized costs									
Proved properties	31,496	10,578	76,476	3,205	9,796	39,020	–	24,177	199,809
Unproved properties	395	165	6,294	2,454	2,984	5,769	–	2,773	21,722
	31,891	10,743	82,770	5,659	12,780	44,789	–	26,950	221,531
Accumulated depreciation	21,068	6,610	39,383	190	5,482	25,105	–	13,501	113,554
Net capitalized costs	10,823	4,133	43,387	5,469	7,298	19,684	–	13,449	107,977
Costs incurred for the year ended 31 December^{a b}									
Acquisition of properties									
Proved	42	–	6	–	–	–	–	557	605
Unproved	–	–	346	–	75	57	–	–	478
	42	–	352	–	75	57	–	557	1,083
Exploration and appraisal costs ^c	279	16	888	109	325	899	–	194	2,911
Development	2,067	293	4,792	706	983	2,881	–	3,205	15,096
Total costs	2,388	309	6,032	815	1,383	3,837	–	3,956	19,090
Results of operations for the year ended 31 December^{a d}									
Sales and other operating revenues ^e									
Third parties	529	77	1,218	4	2,802	2,536	–	1,135	10,875
Sales between businesses	1,069	1,662	14,894	15	450	6,289	–	6,951	31,954
	1,598	1,739	16,112	19	3,252	8,825	–	8,086	42,829
Exploration expenditure	94	47	1,294	63	502	860	–	712	3,632
Production costs	979	436	3,492	34	783	1,542	–	1,289	8,787
Production taxes	(234)	–	690	–	175	–	–	2,234	93
Other costs (income) ^f	(1,515)	77	3,260	55	284	120	57	(69)	2,612
Depreciation, depletion and amortization	506	676	3,805	4	678	3,343	–	2,461	11,728
Net impairments and (gains) losses on sale of businesses and fixed assets	2,537	2,278	(28)	–	11	1,128	–	391	6,317
	2,367	3,514	12,513	156	2,433	6,993	57	7,018	36,034
Profit (loss) before taxation ^g	(769)	(1,775)	3,599	(137)	819	1,832	(57)	1,068	6,795
Allocable taxes	(1,383)	(1,108)	1,269	15	865	1,216	3	67	2,105
Results of operations	614	(667)	2,330	(152)	(46)	616	(60)	1,001	4,690
Upstream and Rosneft segments replacement cost profit before interest and tax									
Exploration and production activities – subsidiaries (as above)	(769)	(1,775)	3,599	(137)	819	1,832	(57)	1,068	6,795
Midstream and other activities – subsidiaries ^h	163	99	703	130	175	(170)	(26)	(63)	1,025
Equity-accounted entities ⁱ	–	62	23	–	480	(33)	2,125	557	3,214
Total replacement cost profit before interest and tax	(606)	(1,614)	4,325	(7)	1,474	1,629	2,042	1,562	11,034

^a These tables contain information relating to oil and natural gas exploration and production activities of subsidiaries, which includes our share of oil and natural gas exploration and production activities of joint operations. They do not include any costs relating to the Gulf of Mexico oil spill. Amounts relating to the management and ownership of crude oil and natural gas pipelines, LNG liquefaction and transportation operations are excluded. In addition, our midstream activities of marketing and trading of natural gas, power and NGLs in the US, Canada, UK and Europe are excluded. The most significant midstream pipeline interests include the Trans-Alaska Pipeline System, the Forties Pipeline System, the Central Area Transmission System pipeline, the South Caucasus Pipeline and the Baku-Tbilisi-Ceyhan pipeline. Major LNG activities are located in Trinidad, Indonesia, Australia and Angola.

^b Decommissioning assets are included in capitalized costs at 31 December but are excluded from costs incurred for the year.

^c Includes exploration and appraisal drilling expenditures, which are capitalized within intangible assets, and geological and geophysical exploration costs, which are charged to income as incurred.

^d Amendments have been made to previously published amounts for the Australasia region with no overall effect on total replacement cost profit before interest and tax.

^e Presented net of transportation costs, purchases and sales taxes.

^f Includes property taxes, other government take and the fair value gain on embedded derivatives of \$430 million. The UK region includes a \$1,016 million gain offset by corresponding charges, primarily in the US region, relating to the group self-insurance programme.

^g Excludes the unwinding of the discount on provisions and payables amounting to \$207 million which is included in finance costs in the group income statement.

^h Midstream and other activities excludes inventory holding gains and losses.

ⁱ BP's share of the profits of equity-accounted entities are included after interest and tax reported by those entities.

Oil and natural gas exploration and production activities continued

	\$ million								
	Europe		North America		South America	Africa	Asia	Australasia	2014 Total
	UK	Rest of Europe	US	Rest of North America			Russia ^a	Rest of Asia	
Equity-accounted entities (BP share)									
Capitalized costs at 31 December^{b c}									
Gross capitalized costs									
Proved properties	–	–	–	–	8,719	–	12,971	3,073	24,763
Unproved properties	–	–	–	–	5	–	376	25	406
	–	–	–	–	8,724	–	13,347	3,098	25,169
Accumulated depreciation	–	–	–	–	3,652	–	2,031	2,986	8,669
Net capitalized costs	–	–	–	–	5,072	–	11,316	112	16,500
Costs incurred for the year ended 31 December^{b c}									
Acquisition of properties ^d									
Proved	–	–	–	–	–	–	(46)	–	(46)
Unproved	–	–	–	–	–	–	87	–	87
	–	–	–	–	–	–	41	–	41
Exploration and appraisal costs ^e	–	–	–	–	5	–	128	4	137
Development ^f	–	–	–	–	1,026	–	1,913	326	3,265
Total costs	–	–	–	–	1,031	–	2,082	330	3,443
Results of operations for the year ended 31 December^b									
Sales and other operating revenues ^g									
Third parties	–	–	–	–	2,472	–	–	1,257	3,729
Sales between businesses	–	–	–	–	–	–	10,972	19	10,991
	–	–	–	–	2,472	–	10,972	1,276	14,720
Exploration expenditure	–	–	–	–	4	–	62	1	67
Production costs	–	–	–	–	567	–	1,318	152	2,037
Production taxes	–	–	–	–	721	–	5,214	692	6,627
Other costs (income)	–	–	–	–	4	–	302	–	306
Depreciation, depletion and amortization	–	–	–	–	370	–	1,509	371	2,250
Net impairments and losses on sale of businesses and fixed assets	–	–	–	–	25	–	–	–	25
	–	–	–	–	1,691	–	8,405	1,216	11,312
Profit (loss) before taxation	–	–	–	–	781	–	2,567	60	3,408
Allocable taxes	–	–	–	–	402	–	637	29	1,068
Results of operations	–	–	–	–	379	–	1,930	31	2,340
Upstream and Rosneft segments replacement cost profit before interest and tax from equity-accounted entities									
Exploration and production activities – equity-accounted entities after tax (as above)	–	–	–	–	379	–	1,930	31	2,340
Midstream and other activities after tax ^h	–	62	23	–	101	(33)	195	526	874
Total replacement cost profit after interest and tax	–	62	23	–	480	(33)	2,125	557	3,214

^a Amounts reported for Russia include BP's share of Rosneft's worldwide activities, including insignificant amounts outside Russia.

^b These tables contain information relating to oil and natural gas exploration and production activities of equity-accounted entities. Amounts relating to the management and ownership of crude oil and natural gas pipelines, LNG liquefaction and transportation operations as well as downstream activities of Rosneft are excluded. The amounts reported for equity-accounted entities exclude the corresponding amounts for their equity-accounted entities.

^c The amounts shown reflect BP's share of equity-accounted entities' costs incurred, and not the costs incurred by BP in acquiring an interest in equity-accounted entities.

^d Decommissioning assets are included in capitalized costs at 31 December but are excluded from costs incurred for the year.

^e Includes exploration and appraisal drilling expenditures, which are capitalized within intangible assets, and geological and geophysical exploration costs, which are charged to income as incurred.

^f An amendment has been made to the amounts previously disclosed for Rest of Asia region.

^g Presented net of transportation costs and sales taxes.

^h Includes interest and adjustment for non-controlling interests. Excludes inventory holding gains and losses.

Oil and natural gas exploration and production activities continued

	\$ million 2015									
	Europe		North America		South America	Africa	Asia	Australasia		Total
	UK	Rest of Europe	US	Rest of North America			Russia	Rest of Asia		
Subsidiaries										
Capitalized costs at 31 December^{a,b}										
Gross capitalized costs										
Proved properties	33,214	10,568	80,716	3,559	11,051	42,807	–	28,474	5,177	215,566
Unproved properties	437	168	5,602	2,377	2,964	4,635	–	2,740	933	19,856
	33,651	10,736	86,318	5,936	14,015	47,442	–	31,214	6,110	235,422
Accumulated depreciation	21,447	7,172	43,290	191	6,251	29,406	–	15,967	2,677	126,401
Net capitalized costs	12,204	3,564	43,028	5,745	7,764	18,036	–	15,247	3,433	109,021
Costs incurred for the year ended 31 December^{a,b}										
Acquisition of properties										
Proved	17	–	131	–	–	259	–	–	–	407
Unproved	–	–	56	–	(118)	8	–	–	–	(54)
	17	–	187	–	(118)	267	–	–	–	353
Exploration and appraisal costs ^c	178	11	651	75	114	533	5	102	125	1,794
Development	1,784	73	3,662	324	1,299	2,749	–	3,439	128	13,458
Total costs	1,979	84	4,500	399	1,295	3,549	5	3,541	253	15,605
Results of operations for the year ended 31 December^a										
Sales and other operating revenues ^d										
Third parties	496	209	651	14	1,594	1,829	–	800	1,450	7,043
Sales between businesses	1,149	718	7,427	2	33	4,005	–	4,028	340	17,702
	1,645	927	8,078	16	1,627	5,834	–	4,828	1,790	24,745
Exploration expenditure	115	8	960	108	51	1,001	5	53	52	2,353
Production costs	879	313	2,777	77	703	1,521	–	1,083	166	7,519
Production taxes	(273)	–	215	–	214	–	–	834	46	1,036
Other costs (income) ^e	(795)	92	2,460	48	140	358	27	76	215	2,621
Depreciation, depletion and amortization	949	544	3,671	13	673	3,412	–	2,420	322	12,004
Net impairments and (gains) losses on sale of businesses and fixed assets	(390)	17	340	–	101	846	–	105	140	1,159
	485	974	10,423	246	1,882	7,138	32	4,571	941	26,692
Profit (loss) before taxation ^f	1,160	(47)	(2,345)	(230)	(255)	(1,304)	(32)	257	849	(1,947)
Allocable taxes ^g	(930)	159	(857)	(5)	(28)	694	(5)	(66)	472	(566)
Results of operations	2,090	(206)	(1,488)	(225)	(227)	(1,998)	(27)	323	377	(1,381)
Upstream and Rosneft segments replacement cost profit before interest and tax										
Exploration and production activities – subsidiaries (as above)	1,160	(47)	(2,345)	(230)	(255)	(1,304)	(32)	257	849	(1,947)
Midstream and other activities – subsidiaries ^h	401	110	43	10	211	(39)	(16)	67	14	801
Equity-accounted entities ⁱ	–	(7)	19	–	370	(552)	1,326	363	–	1,519
Total replacement cost profit before interest and tax	1,561	56	(2,283)	(220)	326	(1,895)	1,278	687	863	373

^a These tables contain information relating to oil and natural gas exploration and production activities of subsidiaries, which includes our share of oil and natural gas exploration and production activities of joint operations. They do not include any costs relating to the Gulf of Mexico oil spill. Amounts relating to the management and ownership of crude oil and natural gas pipelines, LNG liquefaction and transportation operations are excluded. In addition, our midstream activities of marketing and trading of natural gas, power and NGLs in the US, Canada, UK and Europe are excluded. The most significant midstream pipeline interests include the Trans-Alaska Pipeline System, the Forties Pipeline System, the South Caucasus Pipeline and the Baku-Tbilisi-Ceyhan pipeline. Major LNG activities are located in Trinidad, Indonesia, Australia and Angola.

^b Decommissioning assets are included in capitalized costs at 31 December but are excluded from costs incurred for the year.

^c Includes exploration and appraisal drilling expenditures, which are capitalized within intangible assets, and geological and geophysical exploration costs, which are charged to income as incurred.

^d Presented net of transportation costs, purchases and sales taxes.

^e Includes property taxes, other government take and the fair value gain on embedded derivatives of \$120 million. The UK region includes a \$832-million gain offset by corresponding charges, primarily in the US region, relating to the group self-insurance programme.

^f Excludes the unwinding of the discount on provisions and payables amounting to \$164 million which is included in finance costs in the group income statement.

^g UK region includes the one-off deferred tax impact of the enactment of legislation to reduce the UK supplementary charge tax rate applicable to profits arising in the North Sea from 32% to 20%.

^h Midstream and other activities excludes inventory holding gains and losses.

ⁱ BP's share of the profits of equity-accounted entities are included after interest and tax reported by those entities.

Oil and natural gas exploration and production activities continued

	\$ million								
	Europe		North America		South America	Africa	Asia	Australasia	2015 Total
	UK	Rest of Europe	US	Rest of North America			Russia ^a	Rest of Asia	
Equity-accounted entities (BP share)									
Capitalized costs at 31 December^{b c}									
Gross capitalized costs									
Proved properties	–	–	–	–	9,824	–	12,728	3,486	26,038
Unproved properties	–	–	–	–	–	–	437	26	463
Accumulated depreciation	–	–	–	–	4,117	–	2,788	3,458	10,363
Net capitalized costs	–	–	–	–	5,707	–	10,377	54	16,138
Costs incurred for the year ended 31 December^{b d e}									
Acquisition of properties ^c									
Proved	–	–	–	–	–	–	16	–	16
Unproved	–	–	–	–	–	–	26	–	26
Exploration and appraisal costs ^d	–	–	–	–	–	–	42	–	42
Development	–	–	–	–	8	–	123	1	132
Total costs	–	–	–	–	1,128	–	1,702	443	3,273
	–	–	–	–	1,136	–	1,867	444	3,447
Results of operations for the year ended 31 December^b									
Sales and other operating revenues ^f									
Third parties	–	–	–	–	2,060	–	–	1,022	3,082
Sales between businesses	–	–	–	–	–	–	8,592	19	8,611
	–	–	–	–	2,060	–	8,592	1,041	11,693
Exploration expenditure	–	–	–	–	3	–	52	–	55
Production costs	–	–	–	–	647	–	1,083	168	1,898
Production taxes	–	–	–	–	425	–	3,911	388	4,724
Other costs (income)	–	–	–	–	(381)	–	284	–	(97)
Depreciation, depletion and amortization	–	–	–	–	465	–	992	484	1,941
Net impairments and losses on sale of businesses and fixed assets	–	–	–	–	80	–	–	35	115
	–	–	–	–	1,239	–	6,322	1,075	8,636
Profit (loss) before taxation	–	–	–	–	821	–	2,270	(34)	3,057
Allocable taxes	–	–	–	–	504	–	449	1	954
Results of operations	–	–	–	–	317	–	1,821	(35)	2,103
Upstream and Rosneft segments replacement cost profit before interest and tax from equity-accounted entities									
Exploration and production activities – equity-accounted entities after tax (as above)	–	–	–	–	317	–	1,821	(35)	2,103
Midstream and other activities after tax ^g	–	(7)	19	–	53	(552)	(495)	398	(584)
Total replacement cost profit after interest and tax	–	(7)	19	–	370	(552)	1,326	363	1,519

^a Amounts reported for Russia include BP's share of Rosneft's worldwide activities, including insignificant amounts outside Russia.

^b These tables contain information relating to oil and natural gas exploration and production activities of equity-accounted entities. Amounts relating to the management and ownership of crude oil and natural gas pipelines, LNG liquefaction and transportation operations as well as downstream activities of Rosneft are excluded. The amounts reported for equity-accounted entities exclude the corresponding amounts for their equity-accounted entities.

^c Decommissioning assets are included in capitalized costs at 31 December but are excluded from costs incurred for the year.

^d Includes exploration and appraisal drilling expenditures, which are capitalized within intangible assets, and geological and geophysical exploration costs, which are charged to income as incurred.

^e The amounts shown reflect BP's share of equity-accounted entities' costs incurred, and not the costs incurred by BP in acquiring an interest in equity-accounted entities.

^f Presented net of transportation costs and sales taxes.

^g Includes interest and adjustment for non-controlling interests. Excludes inventory holding gains and losses.

Oil and natural gas exploration and production activities continued

	\$ million								
	2016								
	Europe		North America		South America	Africa	Asia	Australasia	Total
	UK	Rest of Europe	US	Rest of North America			Russia	Rest of Asia	
Subsidiaries									
Capitalized costs at 31 December^{a,b}									
Gross capitalized costs									
Proved properties	34,171	–	81,633	3,622	12,624	46,892	–	30,870	215,564
Unproved properties	483	–	4,712	2,377	2,450	3,808	–	4,132	18,524
	34,654	–	86,345	5,999	15,074	50,700	–	35,002	234,088
Accumulated depreciation	21,745	–	44,988	272	6,764	31,456	–	15,942	123,993
Net capitalized costs	12,909	–	41,357	5,727	8,310	19,244	–	19,060	110,095
Costs incurred for the year ended 31 December^{a,b}									
Acquisition of properties ^c									
Proved	215	–	314	–	–	–	–	703	1,439
Unproved	–	–	38	10	10	181	–	1,728	1,967
	215	–	352	10	10	181	–	2,431	3,406
Exploration and appraisal costs ^d	165	5	391	70	123	297	10	252	1,402
Development	1,284	3	2,372	28	1,519	2,957	–	2,788	11,145
Total costs	1,664	8	3,115	108	1,652	3,435	10	5,471	15,953
Results of operations for the year ended 31 December^a									
Sales and other operating revenues ^e									
Third parties	244	26	640	74	747	1,215	–	97	4,085
Sales between businesses	1,387	421	6,204	2	103	3,391	–	3,908	15,725
	1,631	447	6,844	76	850	4,606	–	4,005	19,810
Exploration expenditure	133	3	693	61	672	87	10	(27)	1,721
Production costs	619	208	2,524	114	476	1,220	–	691	6,006
Production taxes	(351)	–	155	–	38	–	–	800	683
Other costs (income) ^f	(215)	37	1,687	25	115	597	34	115	2,548
Depreciation, depletion and amortization	1,002	209	3,940	66	591	2,937	–	2,179	11,213
Net impairments and (gains) losses on sale of businesses and fixed assets	(809)	(345)	(627)	(5)	(77)	(765)	–	(182)	(2,747)
	379	112	8,372	261	1,815	4,076	44	3,576	19,424
Profit (loss) before taxation ^g	1,252	335	(1,528)	(185)	(965)	530	(44)	429	386
Allocable taxes ^h	(286)	(287)	(402)	(40)	(194)	670	(10)	(74)	(335)
Results of operations	1,538	622	(1,126)	(145)	(771)	(140)	(34)	503	721
Upstream and Rosneft segments replacement cost profit before interest and tax									
Exploration and production activities – subsidiaries (as above)	1,252	335	(1,528)	(185)	(965)	530	(44)	429	386
Midstream and other activities – subsidiaries ⁱ	(417)	54	(14)	(137)	187	(142)	(2)	(81)	(539)
Equity-accounted entities ^{j,k}	–	(1)	20	–	447	(12)	597	266	1,317
Total replacement cost profit before interest and tax	835	388	(1,522)	(322)	(331)	376	551	614	1,164

^a These tables contain information relating to oil and natural gas exploration and production activities of subsidiaries, which includes our share of oil and natural gas exploration and production activities of joint operations. They do not include any costs relating to the Gulf of Mexico oil spill. Amounts relating to the management and ownership of crude oil and natural gas pipelines, LNG liquefaction and transportation operations are excluded. In addition, our midstream activities of marketing and trading of natural gas, power and NGLs in the US, Canada, UK and Europe are excluded. The most significant midstream pipeline interests include the Trans-Alaska Pipeline System, the Forties Pipeline System, the South Caucasus Pipeline and the Baku-Tbilisi-Ceyhan pipeline. Major LNG activities are located in Trinidad, Indonesia, Australia and Angola.

^b Decommissioning assets are included in capitalized costs at 31 December but are excluded from costs incurred for the year.

^c Rest of Asia amounts include BP's participating interest in the Abu Dhabi ADCO concession.

^d Includes exploration and appraisal drilling expenditures, which are capitalized within intangible assets, and geological and geophysical exploration costs, which are charged to income as incurred.

^e Presented net of transportation costs, purchases and sales taxes.

^f Includes property taxes, other government take and the fair value gain on embedded derivatives of \$32 million. The UK region includes a \$454-million gain offset by corresponding charges, primarily in the US region, relating to the group self-insurance programme.

^g Excludes the unwinding of the discount on provisions and payables amounting to \$152 million which is included in finance costs in the group income statement.

^h UK region includes the deferred tax impact of the enactment of legislation to reduce the UK supplementary charge tax rate applicable to profits arising in the North Sea from 20% to 10%.

ⁱ Midstream and other activities excludes inventory holding gains and losses.

^j The profits of equity-accounted entities are included after interest and tax.

^k Includes the results of BP's 30% interest in Aker BP ASA from 1 October 2016.

Oil and natural gas exploration and production activities continued

	\$ million								
	Europe		North America		South America	Africa	Asia	Australasia	2016 Total
	UK	Rest of Europe	US	Rest of North America			Russia ^a	Rest of Asia	
Equity-accounted entities (BP share)									
Capitalized costs at 31 December^{b c}									
Gross capitalized costs									
Proved properties	–	2,702	–	–	10,211	–	19,818	3,009	– 35,740
Unproved properties	–	296	–	–	6	–	369	26	– 697
	–	2,998	–	–	10,217	–	20,187	3,035	– 36,437
Accumulated depreciation	–	48	–	–	4,615	–	4,379	3,035	– 12,077
Net capitalized costs	–	2,950	–	–	5,602	–	15,808	–	– 24,360
Costs incurred for the year ended 31 December^{b d e}									
Acquisition of properties ^c									
Proved	–	–	–	–	–	–	1,956	–	– 1,956
Unproved	–	–	–	–	–	–	70	–	– 70
	–	–	–	–	–	–	2,026	–	– 2,026
Exploration and appraisal costs ^d	–	18	–	–	7	–	105	1	– 131
Development	–	54	–	–	559	–	2,014	371	– 2,998
Total costs	–	72	–	–	566	–	4,145	372	– 5,155
Results of operations for the year ended 31 December^b									
Sales and other operating revenues ^f									
Third parties	–	162	–	–	1,865	–	–	876	– 2,903
Sales between businesses	–	–	–	–	–	–	8,129	16	– 8,145
	–	162	–	–	1,865	–	8,129	892	– 11,048
Exploration expenditure	–	13	–	–	–	–	50	–	– 63
Production costs	–	36	–	–	559	–	1,106	145	– 1,846
Production taxes	–	–	–	–	335	–	3,391	352	– 4,078
Other costs (income)	–	(13)	–	–	(429)	–	368	3	– (71)
Depreciation, depletion and amortization	–	48	–	–	499	–	1,072	386	– 2,005
Net impairments and losses on sale of businesses and fixed assets	–	–	–	–	164	–	25	–	– 189
	–	84	–	–	1,128	–	6,012	886	– 8,110
Profit (loss) before taxation	–	78	–	–	737	–	2,117	6	– 2,938
Allocable taxes	–	75	–	–	319	–	433	3	– 830
Results of operations ^g	–	3	–	–	418	–	1,684	3	– 2,108
Upstream and Rosneft segments replacement cost profit before interest and tax from equity-accounted entities									
Exploration and production activities – equity-accounted entities after tax (as above)	–	3	–	–	418	–	1,684	3	– 2,108
Midstream and other activities after tax ^h	–	(4)	20	–	29	(12)	(1,087)	263	– (791)
Total replacement cost profit after interest and tax	–	(1)	20	–	447	(12)	597	266	– 1,317

^a Amounts reported for Russia include BP's share of Rosneft's worldwide activities, including insignificant amounts outside Russia.

^b These tables contain information relating to oil and natural gas exploration and production activities of equity-accounted entities. Amounts relating to the management and ownership of crude oil and natural gas pipelines, LNG liquefaction and transportation operations as well as downstream activities of Rosneft are excluded. The amounts reported for equity-accounted entities exclude the corresponding amounts for their equity-accounted entities.

^c Decommissioning assets are included in capitalized costs at 31 December but are excluded from costs incurred for the year.

^d Includes exploration and appraisal drilling expenditures, which are capitalized within intangible assets, and geological and geophysical exploration costs, which are charged to income as incurred.

^e The amounts shown reflect BP's share of equity-accounted entities' costs incurred, and not the costs incurred by BP in acquiring an interest in equity-accounted entities.

^f Presented net of transportation costs and sales taxes.

^g Includes the results of BP's 30% interest in Aker BP ASA from 1 October 2016.

^h Includes interest and adjustment for non-controlling interests. Excludes inventory holding gains and losses.

Movements in estimated net proved reserves

Crude oil ^{a b}	million barrels									
	Europe		North America		South America	Africa	Asia		"Australasia"	2012 Total
	UK	Rest of Europe	US ^c	Rest of North America			Russia	Rest of Asia		
Subsidiaries										
At 1 January										
Developed	276	66	1,337	–	23	304	–	176	50	2,233
Undeveloped	436	208	1,021	178	30	294	–	279	36	2,482
	712	274	2,357	178	53	598	–	455	86	4,715
Changes attributable to										
Revisions of previous estimates	(30)	(23)	(288)	17	(11)	(1)	–	(2)	–	(337)
Improved recovery	3	–	77	–	–	13	–	2	–	95
Purchases of reserves-in-place	4	–	4	–	–	–	–	–	–	8
Discoveries and extensions	–	1	10	–	–	2	–	–	–	12
Production	(30)	(8)	(115)	–	(6)	(70)	–	(51)	(8)	(287)
Sales of reserves-in-place	(6)	(18)	(101)	–	–	–	–	–	–	(124)
	(59)	(48)	(412)	17	(17)	(56)	–	(51)	(8)	(633)
At 31 December^{d e}										
Developed	228	153	1,127	–	16	306	–	268	45	2,143
Undeveloped	426	73	818	195	20	236	–	137	34	1,938
	654	226	1,945	195	36	542	–	405	79	4,081
Equity-accounted entities (BP share)^f										
At 1 January										
Developed	–	–	–	–	345	–	2,596	256	–	3,197
Undeveloped	–	–	–	–	344	3	1,613	58	–	2,018
	–	–	–	–	689	3	4,209	314	–	5,215
Changes attributable to										
Revisions of previous estimates	–	–	–	–	(2)	3	377	(23)	–	355
Improved recovery	–	–	–	–	24	–	47	–	–	71
Purchases of reserves-in-place	–	–	–	–	–	–	–	–	–	–
Discoveries and extensions	–	–	–	–	–	–	67	–	–	67
Production	–	–	–	–	(29)	–	(309)	(80)	–	(418)
Sales of reserves-in-place	–	–	–	–	–	–	(15)	–	–	(15)
	–	–	–	–	(7)	3	167	(103)	–	60
At 31 December^{g h i}										
Developed	–	–	–	–	336	3	2,433	198	–	2,970
Undeveloped	–	–	–	–	347	2	1,943	13	–	2,305
	–	–	–	–	683	5	4,376	211	–	5,275
Total subsidiaries and equity-accounted entities (BP share)										
At 1 January										
Developed	276	66	1,337	–	368	304	2,596	432	50	5,430
Undeveloped	436	208	1,021	178	375	297	1,613	337	36	4,500
	712	274	2,357	178	743	601	4,209	769	86	9,930
At 31 December										
Developed	228	153	1,127	–	352	309	2,433	466	45	5,113
Undeveloped	426	73	818	195	367	239	1,943	150	34	4,243
	654	226	1,945	195	719	547	4,376	616	79	9,357

^a Crude oil includes condensate and bitumen. Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c Proved reserves in the Prudhoe Bay field in Alaska include an estimated 76 million barrels upon which a net profits royalty will be payable over the life of the field under the terms of the BP Prudhoe Bay Royalty Trust.

^d Includes 9 million barrels of crude oil in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

^e Includes assets held for sale of 39 million barrels.

^f Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^g Includes 328 million barrels of crude oil in respect of the 7.35% non-controlling interest in TNK-BP.

^h Total proved crude oil reserves held as part of our equity interest in TNK-BP is 4,463 million barrels, comprising 87 million barrels in Venezuela and 4,376 million barrels in Russia.

ⁱ Includes assets held for sale of 4,463 million barrels.

Movements in estimated net proved reserves continued

	million barrels									
Natural gas liquids ^{a b}										2012
	Europe		North America		South America	Africa	Asia	Australasia		Total
	UK	Rest of Europe	US	Rest of North America			Russia	Rest of Asia		
Subsidiaries										
At 1 January										
Developed	12	3	348	–	4	7	–	1	9	383
Undeveloped	9	22	152	–	18	21	–	–	11	233
	21	25	501	–	22	28	–	1	20	616
Changes attributable to										
Revisions of previous estimates	–	(2)	8	–	–	–	–	–	–	5
Improved recovery	–	–	63	–	–	–	–	–	–	63
Purchases of reserves-in-place	–	–	17	–	–	–	–	–	–	17
Discoveries and extensions	–	–	13	–	–	–	–	–	–	14
Production ^c	(1)	–	(27)	–	(4)	(3)	–	–	(1)	(37)
Sales of reserves-in-place	–	–	(87)	–	–	–	–	–	–	(88)
	(1)	(2)	(14)	–	(4)	(3)	–	–	(1)	(26)
At 31 December ^d										
Developed	14	17	316	–	6	6	–	–	7	366
Undeveloped	5	6	171	–	12	19	–	–	11	225
	19	23	487	–	18	25	–	–	18	591
Equity-accounted entities (BP share) ^e										
At 1 January										
Developed	–	–	–	–	4	–	–	–	–	4
Undeveloped	–	–	–	–	4	11	–	–	–	15
	–	–	–	–	8	11	–	–	–	19
Changes attributable to										
Revisions of previous estimates	–	–	–	–	–	6	85	–	–	91
Improved recovery	–	–	–	–	–	–	–	–	–	–
Purchases of reserves-in-place	–	–	–	–	–	–	–	–	–	–
Discoveries and extensions	–	–	–	–	–	–	–	–	–	–
Production	–	–	–	–	–	–	(7)	–	–	(7)
Sales of reserves-in-place	–	–	–	–	–	–	–	–	–	–
	–	–	–	–	–	6	78	–	–	84
At 31 December ^{f g}										
Developed	–	–	–	–	3	9	59	–	–	71
Undeveloped	–	–	–	–	4	9	19	–	–	32
	–	–	–	–	7	18	78	–	–	103
Total subsidiaries and equity-accounted entities (BP share)										
At 1 January										
Developed	12	3	348	–	8	7	–	1	9	387
Undeveloped	9	22	152	–	21	32	–	–	11	248
	21	25	501	–	29	39	–	1	20	635
At 31 December										
Developed	14	17	316	–	9	15	59	–	7	437
Undeveloped	5	6	171	–	16	27	19	–	11	257
	19	23	487	–	25	43	78	–	18	693

^a Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c Excludes NGLs from processing plants in which an interest is held of 13,500 barrels per day.

^d Includes 5 million barrels of NGL in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

^e Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^f Total proved NGL reserves held as part of our equity interest in TNK-BP is 78 million barrels, all in Russia.

^g Includes assets held for sale of 78 million barrels.

Movements in estimated net proved reserves continued

	million barrels									
Total liquids ^{a b}	Europe		North America		South America	Africa	Asia	"Australasia"		2012 Total
	UK	Rest of Europe	US ^c	Rest of North America			Russia	Rest of Asia		
Subsidiaries										
At 1 January										
Developed	287	69	1,686	–	27	311	–	177	59	2,617
Undeveloped	445	230	1,173	178	48	314	–	279	47	2,714
	733	299	2,859	178	75	625	–	456	106	5,331
Changes attributable to										
Revisions of previous estimates	(29)	(25)	(280)	18	(11)	(1)	–	(2)	–	(331)
Improved recovery	3	–	140	–	–	13	–	2	–	158
Purchases of reserves-in-place	4	–	21	–	–	–	–	–	–	24
Discoveries and extensions	–	1	23	–	–	2	–	–	–	26
Production ^d	(31)	(8)	(141)	–	(10)	(72)	–	(51)	(9)	(324)
Sales of reserves-in-place	(6)	(18)	(188)	–	–	–	–	–	–	(212)
	(59)	(51)	(425)	18	(21)	(59)	–	(51)	(10)	(658)
At 31 December ^{e f}										
Developed	242	170	1,444	–	22	312	–	268	52	2,509
Undeveloped	431	79	989	195	32	255	–	137	45	2,164
	673	249	2,433	195	54	567	–	405	96	4,673
Equity-accounted entities (BP share) ^g										
At 1 January										
Developed	–	–	–	–	349	–	2,595	256	–	3,201
Undeveloped	–	–	–	–	348	14	1,614	58	–	2,034
	–	–	–	–	697	14	4,209	314	–	5,234
Changes attributable to										
Revisions of previous estimates	–	–	–	–	(2)	9	462	(24)	–	445
Improved recovery	–	–	–	–	24	–	47	–	–	71
Purchases of reserves-in-place	–	–	–	–	–	–	–	–	–	–
Discoveries and extensions	–	–	–	–	–	–	67	–	–	67
Production	–	–	–	–	(29)	–	(316)	(80)	–	(425)
Sales of reserves-in-place	–	–	–	–	–	–	(15)	–	–	(15)
	–	–	–	–	(7)	9	244	(103)	–	144
At 31 December ^{h i j}										
Developed	–	–	–	–	339	12	2,492	198	–	3,041
Undeveloped	–	–	–	–	351	11	1,962	13	–	2,337
	–	–	–	–	691	23	4,453	211	–	5,378
Total subsidiaries and equity-accounted entities (BP share)										
At 1 January										
Developed	287	69	1,686	–	376	311	2,595	433	59	5,817
Undeveloped	445	230	1,173	178	396	328	1,614	337	47	4,748
	733	299	2,859	178	772	640	4,209	770	106	10,565
At 31 December										
Developed	242	170	1,444	–	361	324	2,492	466	52	5,550
Undeveloped	431	79	989	195	384	266	1,962	150	45	4,501
	673	249	2,433	195	745	590	4,453	616	96	10,051

^a Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c Proved reserves in the Prudhoe Bay field in Alaska include an estimated 76 million barrels of oil equivalent upon which a net profits royalty will be payable, over the life of the field under the terms of the BP Prudhoe Bay Royalty Trust.

^d Excludes NGLs from processing plants in which an interest is held of 13,500 barrels of oil equivalent per day.

^e Also includes 14 million barrels of oil equivalent in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

^f Includes assets held for sale of 4,540 million barrels.

^g Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^h Includes 328 million barrels in respect of the non-controlling interest in TNK-BP.

ⁱ Total proved liquid reserves held as part of our equity interest in TNK-BP is 4,540 million barrels, comprising 87 million barrels in Venezuela and 4,454 million barrels in Russia.

^j Includes assets held for sale of 39 million barrels.

Movements in estimated net proved reserves continued

	billion cubic feet									
Natural gas ^{a,b}										2012
	Europe		North America		South America	Africa	Asia	Australasia		Total
	UK	Rest of Europe	US	Rest of North America			Russia	Rest of Asia		
Subsidiaries										
At 1 January										
Developed	1,411	43	9,721	28	2,869	1,224	–	1,034	3,570	19,900
Undeveloped	909	450	3,831	–	6,529	2,033	–	364	2,365	16,481
	2,320	493	13,552	28	9,398	3,257	–	1,398	5,935	36,381
Changes attributable to										
Revisions of previous estimates	(18)	(13)	(1,853)	(19)	(116)	(14)	–	38	(41)	(2,036)
Improved recovery	95	–	885	–	756	69	–	156	–	1,961
Purchases of reserves-in-place	17	(1)	232	–	–	–	–	–	–	248
Discoveries and extensions	–	7	225	–	598	1	–	–	–	831
Production ^c	(164)	(5)	(661)	(5)	(775)	(251)	–	(253)	(289)	(2,403)
Sales of reserves-in-place	(546)	–	(1,149)	–	(23)	–	–	–	–	(1,718)
	(616)	(12)	(2,321)	(24)	440	(195)	–	(59)	(330)	(3,117)
At 31 December ^{d,e}										
Developed	1,038	340	8,245	4	3,588	1,139	–	926	3,282	18,562
Undeveloped	666	141	2,986	–	6,250	1,923	–	413	2,323	14,702
	1,704	481	11,231	4	9,838	3,062	–	1,339	5,605	33,264
Equity-accounted entities (BP share) ^f										
At 1 January										
Developed	–	–	–	–	1,144	–	2,119	104	–	3,367
Undeveloped	–	–	–	–	1,006	195	659	51	–	1,911
	–	–	–	–	2,150	195	2,778	155	–	5,278
Changes attributable to										
Revisions of previous estimates	–	–	–	–	86	144	569	25	–	824
Improved recovery	–	–	–	–	110	–	–	1	–	111
Purchases of reserves-in-place	–	–	–	–	–	–	–	–	–	–
Discoveries and extensions	–	–	–	–	3	–	1,310	–	–	1,313
Production ^c	–	–	–	–	(169)	–	(280)	(35)	–	(484)
Sales of reserves-in-place	–	–	–	–	–	–	(1)	–	–	(1)
	–	–	–	–	30	144	1,598	(9)	–	1,763
At 31 December ^{g,h,i}										
Developed	–	–	–	–	1,276	175	2,617	128	–	4,196
Undeveloped	–	–	–	–	904	164	1,759	18	–	2,845
	–	–	–	–	2,180	339	4,376	146	–	7,041
Total subsidiaries and equity-accounted entities (BP share)										
At 1 January										
Developed	1,411	43	9,721	28	4,013	1,224	2,119	1,138	3,570	23,267
Undeveloped	909	450	3,831	–	7,535	2,228	659	415	2,365	18,392
	2,320	493	13,552	28	11,548	3,452	2,778	1,553	5,935	41,659
At 31 December										
Developed	1,038	340	8,245	4	4,864	1,314	2,617	1,054	3,282	22,758
Undeveloped	666	141	2,986	–	7,154	2,087	1,759	431	2,323	17,547
	1,704	481	11,231	4	12,018	3,401	4,376	1,485	5,605	40,305

^a Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c Includes 190 billion cubic feet of natural gas consumed in operations, 145 billion cubic feet in subsidiaries, 45 billion cubic feet in equity-accounted entities and excludes 9 billion cubic feet of produced non-hydrocarbon components that meet regulatory requirements for sales.

^d Includes 2,890 billion cubic feet of natural gas in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

^e Includes assets held for sale of 590 billion cubic feet.

^f Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^g Includes 270 billion cubic feet of natural gas in respect of the 6.17% non-controlling interest in TNK-BP.

^h Total proved gas reserves held as part of our equity interest in TNK-BP is 4,492 billion cubic feet, comprising 38 billion cubic feet in Venezuela, 78 billion cubic feet in Vietnam and 4,376 billion cubic feet in Russia.

ⁱ Includes assets held for sale of 4,492 billion cubic feet.

Movements in estimated net proved reserves continued

million barrels of oil equivalent ^c										
Total hydrocarbons ^{a,b}										2012
	Europe		North America		South America	Africa	Asia		Australasia	Total
	UK	Rest of Europe	US ^d	Rest of North America			Russia	Rest of Asia		
Subsidiaries										
At 1 January										
Developed	531	76	3,362	5	522	522	–	355	675	6,048
Undeveloped	602	308	1,833	178	1,173	665	–	342	455	5,556
	1,133	384	5,195	183	1,695	1,187	–	697	1,130	11,604
Changes attributable to										
Revisions of previous estimates	(33)	(27)	(600)	14	(31)	(3)	–	5	(8)	(683)
Improved recovery	19	–	293	–	130	25	–	29	–	496
Purchases of reserves-in-place	7	–	61	–	–	–	–	–	–	68
Discoveries and extensions	–	2	62	–	103	2	–	–	–	169
Production ^{e,f}	(59)	(9)	(256)	(1)	(143)	(116)	–	(95)	(59)	(738)
Sales of reserves-in-place	(100)	(18)	(386)	–	(4)	–	–	–	–	(508)
	(166)	(52)	(826)	13	55	(92)	–	(61)	(67)	(1,196)
At 31 December ^{g,h}										
Developed	421	229	2,865	1	640	508	–	427	618	5,709
Undeveloped	546	103	1,504	195	1,110	587	–	209	445	4,699
	967	332	4,369	196	1,750	1,095	–	636	1,063	10,408
Equity-accounted entities (BP share)ⁱ										
At 1 January										
Developed	–	–	–	–	546	–	2,961	274	–	3,781
Undeveloped	–	–	–	–	522	48	1,727	66	–	2,363
	–	–	–	–	1,068	48	4,688	340	–	6,144
Changes attributable to										
Revisions of previous estimates	–	–	–	–	13	34	560	(19)	–	588
Improved recovery	–	–	–	–	43	–	47	–	–	90
Purchases of reserves-in-place	–	–	–	–	–	–	–	–	–	–
Discoveries and extensions	–	–	–	–	1	–	292	–	–	293
Production ^{e,f}	–	–	–	–	(58)	–	(364)	(86)	–	(508)
Sales of reserves-in-place	–	–	–	–	–	–	(15)	–	–	(15)
	–	–	–	–	(1)	34	520	(105)	–	448
At 31 December ^{k,l}										
Developed	–	–	–	–	559	43	2,943	220	–	3,765
Undeveloped	–	–	–	–	508	39	2,265	15	–	2,827
	–	–	–	–	1,067	82	5,208	235	–	6,592
Total subsidiaries and equity-accounted entities (BP share)										
At 1 January										
Developed	531	76	3,362	5	1,068	522	2,961	629	675	9,829
Undeveloped	602	308	1,833	178	1,695	713	1,727	408	455	7,919
	1,133	384	5,195	183	2,763	1,235	4,688	1,037	1,130	17,748
At 31 December										
Developed	421	229	2,865	1	1,199	551	2,943	647	618	9,474
Undeveloped	546	103	1,504	195	1,618	626	2,265	224	445	7,526
	967	332	4,369	196	2,817	1,177	5,208	871	1,063	17,000

^a Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c 5.8 billion cubic feet of natural gas = 1 million barrels of oil equivalent.

^d Proved reserves in the Prudhoe Bay field in Alaska include an estimated 76 million barrels of oil equivalent upon which a net profits royalty will be payable, over the life of the field under the terms of the BP Prudhoe Bay Royalty Trust.

^e Excludes NGLs from processing plants in which an interest is held of 13,500 barrels of oil equivalent per day.

^f Includes 33 million barrels of oil equivalent of natural gas consumed in operations, 25 million barrels of oil equivalent in subsidiaries, 8 million barrels of oil equivalent in equity-accounted entities and excludes 2 million barrels of oil equivalent of produced non-hydrocarbon components that meet regulatory requirements for sales.

^g Includes 591 million barrels of NGLs and 512 million barrels of oil equivalent in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

^h Includes assets held for sale of 140 million barrels of oil equivalent.

ⁱ Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^j Includes 103 million barrels of NGLs. Also includes 374 million barrels of oil equivalent in respect of the non-controlling interest in TNK-BP.

^k Total proved reserves held as part of our equity interest in TNK-BP is 5,315 million barrels of oil equivalent, comprising 93 million barrels of oil equivalent in Venezuela, 14 million barrels of oil equivalent in Vietnam and 5,208 million barrels of oil equivalent in Russia.

^l Includes assets held for sale of 5,315 million barrels of oil equivalent.

Movements in estimated net proved reserves continued

	million barrels								
Crude oil ^{a b}	2013								
	Europe		North America	Rest of North America	South America	Africa	Asia	Australasia	Total
	UK	Rest of Europe	US ^c				Russia	Rest of Asia	
Subsidiaries									
At 1 January									
Developed	228	153	1,127	–	16	306	–	268	2,143
Undeveloped	426	73	818	195	20	236	–	137	1,938
	654	226	1,945	195	36	542	–	405	4,081
Changes attributable to									
Revisions of previous estimates	(79)	(15)	(111)	(7)	1	30	–	65	(121)
Improved recovery	11	–	33	–	1	2	–	65	112
Purchases of reserves-in-place	–	–	–	–	–	–	–	–	–
Discoveries and extensions	–	–	2	–	–	–	–	39	44
Production	(21)	(11)	(108)	–	(7)	(79)	–	(52)	(285)
Sales of reserves-in-place	(31)	–	(1)	–	–	–	–	–	(32)
	(120)	(26)	(185)	(7)	(5)	(47)	–	117	(283)
At 31 December ^d									
Developed	160	147	1,007	–	15	316	–	320	2,013
Undeveloped	374	53	752	188	17	180	–	202	1,785
	534	200	1,760	188	31	495	–	522	3,798
Equity-accounted entities (BP share) ^{e f}									
At 1 January									
Developed	–	–	–	–	336	3	2,433	198	2,970
Undeveloped	–	–	–	–	347	2	1,943	13	2,305
	–	–	–	–	683	5	4,376	211	5,275
Changes attributable to									
Revisions of previous estimates	–	–	–	1	(14)	(1)	295	1	281
Improved recovery	–	–	–	–	27	–	–	–	27
Purchases of reserves-in-place	–	–	–	–	34	–	4,550	–	4,584
Discoveries and extensions	–	–	–	–	12	–	228	–	240
Production	–	–	–	–	(27)	–	(301)	(85)	(412)
Sales of reserves-in-place	–	–	–	–	(85)	–	(4,321)	–	(4,406)
	–	–	–	1	(53)	(1)	451	(84)	314
At 31 December ^g									
Developed	–	–	–	–	316	2	2,970	120	3,407
Undeveloped	–	–	–	1	314	2	1,858	7	2,182
	–	–	–	1	630	4	4,828	127	5,590
Total subsidiaries and equity-accounted entities (BP share)									
At 1 January									
Developed	228	153	1,127	–	352	309	2,433	466	5,113
Undeveloped	426	73	818	195	367	239	1,943	150	4,243
	654	226	1,945	195	719	547	4,376	616	9,357
At 31 December									
Developed	160	147	1,007	–	331	317	2,970	440	5,421
Undeveloped	374	53	752	189	331	182	1,858	209	3,965
	534	200	1,760	189	661	499	4,828	649	9,386

^a Crude oil includes condensate and bitumen. Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c Proved reserves in the Prudhoe Bay field in Alaska include an estimated 72 million barrels upon which a net profits royalty will be payable over the life of the field under the terms of the BP Prudhoe Bay Royalty Trust. Includes 8 million barrels of crude oil in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

^e Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^f Includes 23 million barrels of crude oil in respect of the 0.47% non-controlling interest in Rosneft.

^g Total proved crude oil reserves held as part of our equity interest in Rosneft is 4,860 million barrels, comprising less than 1 million barrels in Vietnam and Canada, 32 million barrels in Venezuela and 4,827 million barrels in Russia.

Movements in estimated net proved reserves continued

	million barrels								
Natural gas liquids ^{a b}	2013								
	Europe		North America		South America	Africa	Asia	Australasia ^c	Total
	UK	Rest of Europe	US	Rest of North America			Russia	Rest of Asia	
Subsidiaries									
At 1 January									
Developed	14	17	316	–	6	6	–	–	7
Undeveloped	5	6	171	–	12	19	–	–	11
	19	23	487	–	18	25	–	–	18
Changes attributable to									
Revisions of previous estimates	1	(4)	(30)	–	29	(4)	–	–	(7)
Improved recovery	1	–	19	–	–	–	–	–	20
Purchases of reserves-in-place	–	–	–	–	–	–	–	–	–
Discoveries and extensions	–	–	2	–	–	–	–	–	2
Production ^d	(1)	(1)	(24)	–	(4)	(1)	–	–	(1)
Sales of reserves-in-place	(5)	–	(10)	–	–	–	–	–	(15)
	(4)	(5)	(43)	–	25	(5)	–	–	(8)
At 31 December ^d									
Developed	9	16	290	–	14	4	–	–	8
Undeveloped	6	2	155	–	28	15	–	–	3
	15	18	444	–	43	20	–	–	10
Equity-accounted entities (BP share) ^e									
At 1 January									
Developed	–	–	–	–	3	9	59	–	–
Undeveloped	–	–	–	–	4	9	19	–	–
	–	–	–	–	7	18	78	–	–
Changes attributable to									
Revisions of previous estimates	–	–	–	–	(7)	(2)	89	–	–
Improved recovery	–	–	–	–	–	–	–	–	–
Purchases of reserves-in-place	–	–	–	–	–	–	29	–	–
Discoveries and extensions	–	–	–	–	–	–	–	–	–
Production	–	–	–	–	–	–	(2)	–	–
Sales of reserves-in-place	–	–	–	–	–	–	(78)	–	–
	–	–	–	–	(7)	(2)	38	–	–
At 31 December ^f									
Developed	–	–	–	–	–	8	94	–	–
Undeveloped	–	–	–	–	–	8	21	–	–
	–	–	–	–	–	16	115	–	–
Total subsidiaries and equity-accounted entities (BP share)									
At 1 January									
Developed	14	17	316	–	9	15	59	–	7
Undeveloped	5	6	171	–	16	27	19	–	11
	19	23	487	–	25	43	78	–	18
At 31 December									
Developed	9	16	290	–	14	13	94	–	8
Undeveloped	6	2	155	–	28	23	21	–	3
	15	18	444	–	43	36	115	–	10

^a Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c Excludes NGLs from processing plants in which an interest is held of 5,500 barrels per day.

^d Includes 13 million barrels of NGL in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

^e Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^f Total proved NGL reserves held as part of our equity interest in Rosneft is 115 million barrels, comprising less than 1 million barrels in Venezuela, Vietnam and Canada, and 115 million barrels in Russia.

Movements in estimated net proved reserves continued

	million barrels									
Total liquids ^{a b}										2013 Total
	Europe		North America		South America	Africa	Asia		Australasia ^c	
	UK	Rest of Europe	US ^d	Rest of North America			Russia	Rest of Asia		
Subsidiaries										
At 1 January										
Developed	242	170	1,444	–	22	312	–	268	52	2,509
Undeveloped	431	79	989	195	32	255	–	137	45	2,164
	673	249	2,433	195	54	567	–	405	96	4,673
Changes attributable to										
Revisions of previous estimates	(78)	(19)	(141)	(7)	30	26	–	65	(12)	(136)
Improved recovery	12	–	52	–	1	2	–	65	–	132
Purchases of reserves-in-place	–	–	–	–	–	–	–	–	–	–
Discoveries and extensions	–	–	3	–	–	–	–	39	3	45
Production ^d	(22)	(13)	(132)	–	(11)	(80)	–	(52)	(9)	(319)
Sales of reserves-in-place	(36)	–	(12)	–	–	–	–	–	–	(48)
	(124)	(31)	(229)	(7)	20	(52)	–	117	(18)	(324)
At 31 December ^a										
Developed	169	163	1,297	–	29	320	–	320	57	2,354
Undeveloped	380	55	907	188	46	195	–	202	22	1,994
	549	217	2,204	188	74	515	–	523	78	4,348
Equity-accounted entities (BP share)^f										
At 1 January										
Developed	–	–	–	–	339	12	2,492	198	–	3,041
Undeveloped	–	–	–	–	351	11	1,962	13	–	2,337
	–	–	–	–	691	23	4,453	211	–	5,378
Changes attributable to										
Revisions of previous estimates	–	–	–	1	(21)	(3)	384	1	–	362
Improved recovery	–	–	–	–	27	–	–	–	–	27
Purchases of reserves-in-place	–	–	–	–	34	–	4,579	–	–	4,613
Discoveries and extensions	–	–	–	–	11	–	228	–	–	239
Production	–	–	–	–	(27)	–	(302)	(85)	–	(414)
Sales of reserves-in-place	–	–	–	–	(85)	–	(4,399)	–	–	(4,485)
	–	–	–	1	(61)	(3)	490	(84)	–	343
At 31 December ^{a h}										
Developed	–	–	–	–	316	10	3,063	120	–	3,510
Undeveloped	–	–	–	1	314	10	1,879	7	–	2,210
	–	–	–	1	630	20	4,943	127	–	5,721
Total subsidiaries and equity-accounted entities (BP share)										
At 1 January										
Developed	242	170	1,444	–	361	324	2,492	466	52	5,550
Undeveloped	431	79	989	195	384	266	1,962	150	45	4,501
	673	249	2,433	195	745	590	4,453	616	96	10,051
At 31 December										
Developed	169	163	1,297	–	345	331	3,063	440	57	5,865
Undeveloped	380	55	907	188	359	205	1,879	209	22	4,204
	549	217	2,204	189	704	535	4,943	650	78	10,069

^a Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c Proved reserves in the Prudhoe Bay field in Alaska include an estimated 72 million barrels upon which a net profits royalty will be payable, over the life of the field under the terms of the BP Prudhoe Bay Royalty Trust.

^d Excludes NGLs from processing plants in which an interest is held of 5,500 barrels per day.

^e Also includes 21 million barrels in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

^f Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^g Includes 23 million barrels in respect of the non-controlling interest in Rosneft.

^h Total proved liquid reserves held as part of our equity interest in Rosneft is 4,975 million barrels, comprising 1 million barrels in Canada, 32 million barrels in Venezuela, less than 1 million barrels in Vietnam and 4,943 million barrels in Russia.

Movements in estimated net proved reserves continued

	billion cubic feet									
Natural gas ^{a,b}										2013
	Europe		North America		South America	Africa	Asia	Australasia		Total
	UK	Rest of Europe	US	Rest of North America			Russia	Rest of Asia		
Subsidiaries										
At 1 January										
Developed	1,038	340	8,245	4	3,588	1,139	–	926	3,282	18,562
Undeveloped	666	141	2,986	–	6,250	1,923	–	413	2,323	14,702
	1,704	481	11,231	4	9,838	3,062	–	1,339	5,605	33,264
Changes attributable to										
Revisions of previous estimates	(62)	(47)	(1,166)	10	62	(138)	–	2,148	(140)	667
Improved recovery	49	–	630	–	144	28	–	94	–	945
Purchases of reserves-in-place	9	–	–	–	–	–	–	–	–	9
Discoveries and extensions	–	–	39	–	–	55	–	1,875	511	2,480
Production ^c	(66)	(31)	(635)	(4)	(819)	(239)	–	(199)	(289)	(2,282)
Sales of reserves-in-place	(677)	–	(152)	–	–	–	–	(67)	–	(896)
	(747)	(78)	(1,284)	6	(613)	(294)	–	3,851	82	923
At 31 December ^d										
Developed	643	364	7,122	10	3,109	961	–	1,519	3,932	17,660
Undeveloped	314	39	2,825	–	6,116	1,807	–	3,671	1,755	16,527
	957	403	9,947	10	9,225	2,768	–	5,190	5,687	34,187
Equity-accounted entities (BP share) ^e										
At 1 January										
Developed	–	–	–	–	1,276	175	2,617	128	–	4,196
Undeveloped	–	–	–	–	904	164	1,759	18	–	2,845
	–	–	–	–	2,180	339	4,376	146	–	7,041
Changes attributable to										
Revisions of previous estimates	–	–	–	1	3	29	685	1	–	719
Improved recovery	–	–	–	–	64	–	–	3	–	67
Purchases of reserves-in-place	–	–	–	–	14	–	8,871	33	–	8,918
Discoveries and extensions	–	–	–	–	51	–	254	–	–	305
Production ^c	–	–	–	–	(163)	(3)	(292)	(23)	–	(481)
Sales of reserves-in-place	–	–	–	–	(38)	–	(4,669)	(74)	–	(4,781)
	–	–	–	1	(69)	26	4,849	(60)	–	4,747
At 31 December ^{f,g}										
Developed	–	–	–	–	1,364	230	4,171	72	–	5,837
Undeveloped	–	–	–	1	747	135	5,054	14	–	5,951
	–	–	–	1	2,111	365	9,225	86	–	11,788
Total subsidiaries and equity-accounted entities (BP share)										
At 1 January										
Developed	1,038	340	8,245	4	4,864	1,314	2,617	1,054	3,282	22,758
Undeveloped	666	141	2,986	–	7,154	2,087	1,759	431	2,323	17,547
	1,704	481	11,231	4	12,018	3,401	4,376	1,485	5,605	40,305
At 31 December										
Developed	643	364	7,122	10	4,473	1,191	4,171	1,591	3,932	23,497
Undeveloped	314	39	2,825	1	6,863	1,942	5,054	3,685	1,755	22,478
	957	403	9,947	11	11,336	3,133	9,225	5,276	5,687	45,975

^a Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c Includes 180 billion cubic feet of natural gas consumed in operations, 149 billion cubic feet in subsidiaries, 31 billion cubic feet in equity-accounted entities.

^d Includes 2,685 billion cubic feet of natural gas in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

^e Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^f Includes 41 billion cubic feet of natural gas in respect of the 0.44% non-controlling interest in Rosneft.

^g Total proved gas reserves held as part of our equity interest in Rosneft is 9,271 billion cubic feet, comprising 1 billion cubic feet in Canada, 14 billion cubic feet in Venezuela, 31 billion cubic feet in Vietnam and 9,225 billion cubic feet in Russia.

Movements in estimated net proved reserves continued

Total hydrocarbons ^{a,b}	million barrels of oil equivalent ^c									
	Europe		North America		South America	Africa	Asia	Australasia	2013	
	UK	Rest of Europe	US ^d	Rest of North America			Russia	Rest of Asia		Total
Subsidiaries										
At 1 January										
Developed	421	229	2,865	1	640	508	–	427	618	5,709
Undeveloped	546	103	1,504	195	1,110	587	–	209	445	4,699
	967	332	4,369	196	1,750	1,095	–	636	1,063	10,408
Changes attributable to										
Revisions of previous estimates	(89)	(27)	(342)	(5)	41	3	–	435	(36)	(20)
Improved recovery	20	–	161	–	25	7	–	81	–	294
Purchases of reserves-in-place	2	–	–	–	–	–	–	–	–	2
Discoveries and extensions	–	–	10	–	–	9	–	363	91	473
Production ^{e,f}	(34)	(18)	(241)	(1)	(152)	(121)	–	(86)	(59)	(712)
Sales of reserves-in-place	(152)	–	(38)	–	–	–	–	(12)	–	(202)
	(253)	(45)	(450)	(6)	(86)	(102)	–	781	(4)	(165)
At 31 December ^g										
Developed	280	225	2,525	2	564	486	–	582	735	5,399
Undeveloped	434	62	1,394	188	1,100	507	–	835	324	4,844
	714	287	3,919	190	1,664	993	–	1,417	1,059	10,243
Equity-accounted entities (BP share) ^h										
At 1 January										
Developed	–	–	–	–	559	43	2,943	220	–	3,765
Undeveloped	–	–	–	–	508	39	2,265	15	–	2,827
	–	–	–	–	1,067	82	5,208	235	–	6,592
Changes attributable to										
Revisions of previous estimates	–	–	–	1	(20)	2	502	1	–	486
Improved recovery	–	–	–	–	38	–	–	1	–	39
Purchases of reserves-in-place	–	–	–	–	36	–	6,108	6	–	6,150
Discoveries and extensions	–	–	–	–	20	–	272	–	–	292
Production ⁱ	–	–	–	–	(55)	(1)	(353)	(88)	–	(497)
Sales of reserves-in-place	–	–	–	–	(92)	–	(5,204)	(13)	–	(5,309)
	–	–	–	1	(73)	1	1,325	(93)	–	1,161
At 31 December ^j										
Developed	–	–	–	–	552	50	3,782	133	–	4,517
Undeveloped	–	–	–	1	442	33	2,751	9	–	3,236
	–	–	–	1	994	83	6,533	142	–	7,753
Total subsidiaries and equity-accounted entities (BP share)										
At 1 January										
Developed	421	229	2,865	1	1,199	551	2,943	647	618	9,474
Undeveloped	546	103	1,504	195	1,618	626	2,265	224	445	7,526
	967	332	4,369	196	2,817	1,177	5,208	871	1,063	17,000
At 31 December										
Developed	280	225	2,525	2	1,116	536	3,782	715	735	9,916
Undeveloped	434	62	1,394	189	1,542	540	2,751	844	324	8,080
	714	287	3,919	191	2,658	1,076	6,533	1,559	1,059	17,996

^a Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c 5.8 billion cubic feet of natural gas = 1 million barrels of oil equivalent.

^d Proved reserves in the Prudhoe Bay field in Alaska include an estimated 72 million barrels of oil equivalent upon which a net profits royalty will be payable, over the life of the field under the terms of the BP Prudhoe Bay Royalty Trust.

^e Excludes NGLs from processing plants in which an interest is held of 5,500 barrels of oil equivalent per day.

^f Includes 31 million barrels of oil equivalent of natural gas consumed in operations, 26 million barrels of oil equivalent in subsidiaries, 5 million barrels of oil equivalent in equity-accounted entities.

^g Includes 484 million barrels of oil equivalent in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

^h Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

ⁱ Includes 30 million barrels of oil equivalent in respect of the non-controlling interest in Rosneft.

^j Total proved reserves held as part of our equity interest in Rosneft is 6,574 million barrels of oil equivalent, comprising 1 million barrels of oil equivalent in Canada, 34 million barrels of oil equivalent in Venezuela, 5 million barrels of oil equivalent in Vietnam and 6,533 million barrels of oil equivalent in Russia.

Movements in estimated net proved reserves continued

	million barrels									
Crude oil ^{a b}										2014 Total
	Europe		North America		South America	Africa	Asia		Australasia	
	UK	Rest of Europe	US ^c	Rest of North America			Russia	Rest of Asia ^d		
Subsidiaries										
At 1 January										
Developed	160	147	1,007	–	15	316	–	320	49	2,013
Undeveloped	374	53	752	188	17	180	–	202	19	1,785
	534	200	1,760	188	31	495	–	522	69	3,798
Changes attributable to										
Revisions of previous estimates	(41)	(68)	87	(16)	9	20	–	96	(2)	85
Improved recovery	2	–	16	–	1	3	–	–	–	23
Purchases of reserves-in-place	5	–	–	–	–	–	–	12	–	17
Discoveries and extensions	5	–	–	–	1	–	–	8	–	13
Production ^e	(17)	(15)	(123)	–	(5)	(81)	–	(57)	(7)	(305)
Sales of reserves-in-place	–	–	(45)	–	(5)	–	–	–	–	(50)
	(46)	(82)	(66)	(16)	1	(58)	–	59	(9)	(217)
At 31 December ^f										
Developed	159	95	1,030	9	10	317	–	384	40	2,044
Undeveloped	329	22	664	163	22	120	–	197	19	1,538
	488	117	1,694	172	32	437	–	581	59	3,581
Equity-accounted entities (BP share) ^g										
At 1 January										
Developed	–	–	–	–	316	2	2,970	120	–	3,407
Undeveloped	–	–	–	1	314	2	1,858	7	–	2,182
	–	–	–	1	630	4	4,828	127	–	5,590
Changes attributable to										
Revisions of previous estimates	–	–	–	–	4	(2)	213	9	–	224
Improved recovery	–	–	–	–	12	–	–	–	–	12
Purchases of reserves-in-place	–	–	–	–	–	–	–	–	–	–
Discoveries and extensions	–	–	–	–	10	–	187	–	–	197
Production	–	–	–	–	(26)	–	(297)	(36)	–	(359)
Sales of reserves-in-place	–	–	–	–	–	–	–	–	–	–
	–	–	–	–	–	(2)	103	(27)	–	74
At 31 December ^h										
Developed	–	–	–	–	316	2	2,997	89	–	3,405
Undeveloped	–	–	–	–	314	–	1,933	11	–	2,258
	–	–	–	1	630	2	4,930	101	–	5,663
Total subsidiaries and equity-accounted entities (BP share)										
At 1 January										
Developed	160	147	1,007	–	331	317	2,970	440	49	5,421
Undeveloped	374	53	752	189	331	182	1,858	209	19	3,965
	534	200	1,760	189	661	499	4,828	649	69	9,388
At 31 December										
Developed	159	95	1,030	9	326	319	2,997	473	40	5,448
Undeveloped	329	22	664	164	336	120	1,933	208	19	3,796
	488	117	1,694	173	662	439	4,930	682	59	9,244

^a Crude oil includes condensate and bitumen. Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c Proved reserves in the Prudhoe Bay field in Alaska include an estimated 65 million barrels upon which a net profits royalty will be payable over the life of the field under the terms of the BP Prudhoe Bay Royalty Trust.

^d Production volume recognition methodology for our Technical Service Contract arrangement in Iraq was simplified in 2016 to exclude the impact of oil price movements on lifting imbalances. A minor adjustment has been made to comparative periods back to 2014. There was no impact on 2014 proved reserves totals.

^e Includes 10 million barrels of crude oil in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

^f Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^g Includes 38 million barrels of crude oil in respect of the 0.15% non-controlling interest in Rosneft.

^h Total proved crude oil reserves held as part of our equity interest in Rosneft is 4,961 million barrels, comprising less than 1 million barrels in Vietnam and Canada, 30 million barrels in Venezuela and 4,930 million barrels in Russia.

Movements in estimated net proved reserves continued

	million barrels								
Natural gas liquids ^{a b}									2014
	Europe		North America		South America	Africa	Asia	Australasia	Total
	UK	Rest of Europe	US	Rest of North America			Russia	Rest of Asia	
Subsidiaries									
At 1 January									
Developed	9	16	290	–	14	4	–	–	8
Undeveloped	6	2	155	–	28	15	–	–	3
	15	18	444	–	43	20	–	–	10
Changes attributable to									
Revisions of previous estimates	(6)	(2)	15	–	–	(6)	–	–	–
Improved recovery	–	–	13	–	–	–	–	–	–
Purchases of reserves-in-place	–	–	–	–	–	–	–	–	–
Discoveries and extensions	–	–	–	–	–	–	–	–	–
Production ^c	(1)	(2)	(27)	–	(4)	(2)	–	–	(1)
Sales of reserves-in-place	–	–	(18)	–	–	–	–	–	–
	(6)	(4)	(17)	–	(4)	(8)	–	–	(1)
At 31 December ^d									
Developed	6	13	323	–	11	5	–	–	6
Undeveloped	3	1	104	–	28	7	–	–	3
	9	14	427	–	39	12	–	–	10
Equity-accounted entities (BP share) ^e									
At 1 January									
Developed	–	–	–	–	–	8	94	–	–
Undeveloped	–	–	–	–	–	8	21	–	–
	–	–	–	–	–	16	115	–	–
Changes attributable to									
Revisions of previous estimates	–	–	–	–	–	–	(69)	–	–
Improved recovery	–	–	–	–	–	–	–	–	–
Purchases of reserves-in-place	–	–	–	–	–	–	–	–	–
Discoveries and extensions	–	–	–	–	–	–	–	–	–
Production	–	–	–	–	–	–	–	–	–
Sales of reserves-in-place	–	–	–	–	–	–	–	–	–
	–	–	–	–	–	(1)	(69)	–	–
At 31 December ^f									
Developed	–	–	–	–	–	15	30	–	–
Undeveloped	–	–	–	–	–	–	16	–	–
	–	–	–	–	–	15	46	–	–
Total subsidiaries and equity-accounted entities (BP share)									
At 1 January									
Developed	9	16	290	–	14	13	94	–	8
Undeveloped	6	2	155	–	28	23	21	–	3
	15	18	444	–	43	36	115	–	10
At 31 December									
Developed	6	13	323	–	11	20	30	–	6
Undeveloped	3	1	104	–	28	7	16	–	3
	9	14	427	–	39	27	46	–	10

^a Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c Excludes NGLs from processing plants in which an interest is held of less than 1 thousand barrels per day for subsidiaries and 7 thousand barrels per day for equity-accounted entities.

^d Includes 12 million barrels of NGL in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

^e Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^f Total proved NGL reserves held as part of our equity interest in Rosneft is 47 million barrels, comprising less than 1 million barrels in Venezuela, Vietnam and Canada, and 46 million barrels in Russia.

Movements in estimated net proved reserves continued

	million barrels								
Total liquids ^{a,b}	2014								
	Europe	Rest of Europe	North America	Rest of North America	South America	Africa	Asia	Rest of Asia ^d	Australasia ^c
	UK		US ^c				Russia		
Subsidiaries									
At 1 January									
Developed	169	163	1,297	–	29	320	–	320	57
Undeveloped	380	55	907	188	46	195	–	202	22
	549	217	2,204	188	74	515	–	523	78
Changes attributable to									
Revisions of previous estimates	(47)	(70)	101	(16)	9	14	–	96	(2)
Improved recovery	2	–	28	–	1	3	–	–	–
Purchases of reserves-in-place	5	–	–	–	–	–	–	12	–
Discoveries and extensions	5	–	–	–	1	–	–	8	–
Production ^e	(17)	(17)	(150)	–	(9)	(83)	–	(57)	(8)
Sales of reserves-in-place	–	–	(63)	–	(5)	–	–	–	–
	(52)	(86)	(83)	(16)	(3)	(66)	–	59	(10)
At 31 December ^f									
Developed	166	108	1,352	9	21	322	–	384	46
Undeveloped	332	23	769	163	50	127	–	197	22
	497	131	2,121	172	71	449	–	581	68
Equity-accounted entities (BP share) ^f									
At 1 January									
Developed	–	–	–	–	316	10	3,063	120	–
Undeveloped	–	–	–	1	314	10	1,879	7	–
	–	–	–	1	630	20	4,943	127	–
Changes attributable to									
Revisions of previous estimates	–	–	–	–	4	(3)	144	9	–
Improved recovery	–	–	–	–	12	–	–	–	–
Purchases of reserves-in-place	–	–	–	–	–	–	–	–	–
Discoveries and extensions	–	–	–	–	10	–	187	–	–
Production	–	–	–	–	(26)	–	(297)	(36)	–
Sales of reserves-in-place	–	–	–	–	–	–	–	–	–
	–	–	–	–	–	(3)	34	(27)	–
At 31 December ^{h,i}									
Developed	–	–	–	–	316	17	3,028	89	–
Undeveloped	–	–	–	–	314	–	1,949	11	–
	–	–	–	1	630	17	4,976	101	–
Total subsidiaries and equity-accounted entities (BP share)									
At 1 January									
Developed	169	163	1,297	–	345	331	3,063	440	57
Undeveloped	380	55	907	188	359	205	1,879	209	22
	549	217	2,204	189	704	535	4,943	650	78
At 31 December									
Developed	166	108	1,352	9	337	339	3,028	473	46
Undeveloped	332	23	769	164	364	127	1,949	208	22
	497	131	2,121	173	701	466	4,976	682	68

^a Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c Proved reserves in the Prudhoe Bay field in Alaska include an estimated 65 million barrels of oil equivalent upon which a net profits royalty will be payable, over the life of the field under the terms of the BP Prudhoe Bay Royalty Trust.

^d Production volume recognition methodology for our Technical Service Contract arrangement in Iraq was simplified in 2016 to exclude the impact of oil price movements on lifting imbalances. A minor adjustment has been made to comparative periods back to 2014. There was no impact on 2014 proved reserves totals.

^e Excludes NGLs from processing plants in which an interest is held of less than 1 thousand barrels per day for subsidiaries and 7 thousand barrels per day for equity-accounted entities.

^f Also includes 21 million barrels in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

^g Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^h Includes 38 million barrels in respect of the non-controlling interest in Rosneft.

ⁱ Total proved liquid reserves held as part of our equity interest in Rosneft is 5,007 million barrels, comprising 1 million barrels in Canada, 30 million barrels in Venezuela, less than 1 million barrels in Vietnam and 4,976 million barrels in Russia.

Movements in estimated net proved reserves continued

	billion cubic feet									
Natural gas ^{a,b}										2014
	Europe		North America		South America	Africa	Asia	Australasia		Total
	UK	Rest of Europe	US	Rest of North America			Russia	Rest of Asia		
Subsidiaries										
At 1 January										
Developed	643	364	7,122	10	3,109	961	–	1,519	3,932	17,660
Undeveloped	314	39	2,825	–	6,116	1,807	–	3,671	1,755	16,527
	957	403	9,947	10	9,225	2,768	–	5,190	5,687	34,187
Changes attributable to										
Revisions of previous estimates	(260)	(46)	(29)	11	(258)	(84)	–	(34)	(351)	(1,050)
Improved recovery	7	–	582	–	220	28	–	–	–	838
Purchases of reserves-in-place	1	–	5	–	–	–	–	322	–	328
Discoveries and extensions	94	–	2	–	271	4	–	267	–	637
Production ^c	(30)	(40)	(625)	(4)	(792)	(218)	–	(165)	(302)	(2,177)
Sales of reserves-in-place	–	–	(266)	–	–	–	–	–	–	(266)
	(189)	(85)	(332)	7	(559)	(271)	–	389	(652)	(1,691)
At 31 December ^d										
Developed	382	300	7,168	17	2,352	901	–	1,688	3,316	16,124
Undeveloped	386	19	2,447	–	6,313	1,597	–	3,892	1,719	16,372
	768	318	9,615	17	8,666	2,497	–	5,580	5,035	32,496
Equity-accounted entities (BP share) ^e										
At 1 January										
Developed	–	–	–	–	1,364	230	4,171	72	–	5,837
Undeveloped	–	–	–	1	747	135	5,054	14	–	5,951
	–	–	–	1	2,111	365	9,225	86	–	11,788
Changes attributable to										
Revisions of previous estimates	–	–	–	1	(87)	38	767	1	–	720
Improved recovery	–	–	–	–	23	–	–	–	–	23
Purchases of reserves-in-place	–	–	–	–	–	–	–	–	–	–
Discoveries and extensions	–	–	–	–	69	–	183	–	–	252
Production ^c	–	–	–	–	(172)	(3)	(390)	(18)	–	(583)
Sales of reserves-in-place	–	–	–	–	–	–	–	–	–	–
	–	–	–	–	(166)	35	560	(17)	–	412
At 31 December ^{f,g}										
Developed	–	–	–	1	1,228	400	4,674	60	–	6,363
Undeveloped	–	–	–	1	717	–	5,111	9	–	5,837
	–	–	–	1	1,945	400	9,785	69	–	12,200
Total subsidiaries and equity-accounted entities (BP share)										
At 1 January										
Developed	643	364	7,122	10	4,473	1,191	4,171	1,591	3,932	23,497
Undeveloped	314	39	2,825	1	6,863	1,942	5,054	3,685	1,755	22,478
	957	403	9,947	11	11,336	3,133	9,225	5,276	5,687	45,975
At 31 December										
Developed	382	300	7,168	18	3,581	1,301	4,674	1,748	3,316	22,487
Undeveloped	386	19	2,447	1	7,030	1,597	5,111	3,901	1,719	22,209
	768	318	9,615	18	10,610	2,897	9,785	5,648	5,035	44,695

^a Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c Includes 181 billion cubic feet of natural gas consumed in operations, 151 billion cubic feet in subsidiaries, 29 billion cubic feet in equity-accounted entities.

^d Includes 2,519 billion cubic feet of natural gas in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

^e Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^f Includes 91 billion cubic feet of natural gas in respect of the 0.18% non-controlling interest in Rosneft.

^g Total proved gas reserves held as part of our equity interest in Rosneft is 9,827 billion cubic feet, comprising 1 billion cubic feet in Canada, 14 billion cubic feet in Venezuela, 26 billion cubic feet in Vietnam and 9,785 billion cubic feet in Russia.

Movements in estimated net proved reserves continued

	million barrels of oil equivalent ^c									
Total hydrocarbons ^{a,b}										2014 Total
	Europe		North America		South America	Africa	Asia	"Australasia"		
	UK	Rest of Europe	US ^d	Rest of North America			Russia	Rest of Asia ^e		
Subsidiaries										
At 1 January										
Developed	280	225	2,525	2	564	486	–	582	735	5,399
Undeveloped	434	62	1,394	188	1,100	507	–	835	324	4,844
	714	287	3,919	190	1,664	993	–	1,417	1,059	10,243
Changes attributable to										
Revisions of previous estimates	(91)	(78)	96	(14)	(36)	(1)	–	90	(62)	(96)
Improved recovery	3	–	129	–	39	8	–	–	–	180
Purchases of reserves-in-place	6	–	1	–	–	–	–	68	–	74
Discoveries and extensions	21	–	1	–	47	1	–	54	–	123
Production ^{f,g}	(23)	(24)	(258)	(1)	(146)	(121)	–	(86)	(60)	(717)
Sales of reserves-in-place	–	–	(109)	–	(5)	–	–	–	–	(114)
	(84)	(101)	(140)	(14)	(99)	(113)	–	126	(122)	(548)
At 31 December ^h										
Developed	232	160	2,588	12	426	477	–	675	618	5,187
Undeveloped	398	26	1,191	163	1,139	403	–	868	319	4,507
	630	186	3,779	175	1,565	880	–	1,543	937	9,694
Equity-accounted entities (BP share) ⁱ										
At 1 January										
Developed	–	–	–	–	552	50	3,782	133	–	4,517
Undeveloped	–	–	–	1	442	33	2,751	9	–	3,236
	–	–	–	1	994	83	6,533	142	–	7,753
Changes attributable to										
Revisions of previous estimates	–	–	–	–	(11)	4	276	9	–	278
Improved recovery	–	–	–	–	16	–	–	–	–	16
Purchases of reserves-in-place	–	–	–	–	–	–	–	–	–	–
Discoveries and extensions	–	–	–	–	22	–	219	–	–	241
Production ^g	–	–	–	–	(56)	(1)	(365)	(39)	–	(460)
Sales of reserves-in-place	–	–	–	–	–	–	–	–	–	–
	–	–	–	–	(29)	3	130	(29)	–	75
At 31 December ^k										
Developed	–	–	–	–	528	86	3,834	100	–	4,548
Undeveloped	–	–	–	1	438	–	2,830	13	–	3,280
	–	–	–	1	965	86	6,663	112	–	7,828
Total subsidiaries and equity-accounted entities (BP share)										
At 1 January										
Developed	280	225	2,525	2	1,116	536	3,782	715	735	9,916
Undeveloped	434	62	1,394	189	1,542	540	2,751	844	324	8,080
	714	287	3,919	191	2,658	1,076	6,533	1,559	1,059	17,996
At 31 December										
Developed	232	160	2,588	12	954	563	3,834	775	618	9,735
Undeveloped	398	26	1,191	164	1,576	403	2,830	881	319	7,788
	630	186	3,779	176	2,530	966	6,663	1,656	937	17,523

^a Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c 5.8 billion cubic feet of natural gas = 1 million barrels of oil equivalent.

^d Proved reserves in the Prudhoe Bay field in Alaska include an estimated 65 million barrels of oil equivalent upon which a net profits royalty will be payable, over the life of the field under the terms of the BP Prudhoe Bay Royalty Trust.

^e Production volume recognition methodology for our Technical Service Contract arrangement in Iraq was simplified in 2016 to exclude the impact of oil price movements on lifting imbalances. A minor adjustment has been made to comparative periods back to 2014. There was no impact on 2014 proved reserves totals.

^f Excludes NGLs from processing plants in which an interest is held of less than 1 thousand barrels per day for subsidiaries and 7 thousand barrels per day for equity-accounted entities.

^g Includes 31 million barrels of oil equivalent of natural gas consumed in operations, 26 million barrels of oil equivalent in subsidiaries, 5 million barrels of oil equivalent in equity-accounted entities.

^h Includes 456 million barrels of oil equivalent in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

ⁱ Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^j Includes 54 million barrels of oil equivalent in respect of the non-controlling interest in Rosneft.

^k Total proved reserves held as part of our equity interest in Rosneft is 6,702 million barrels of oil equivalent, comprising 1 million barrels of oil equivalent in Canada, 33 million barrels of oil equivalent in Venezuela, 5 million barrels of oil equivalent in Vietnam and 6,663 million barrels of oil equivalent in Russia.

Movements in estimated net proved reserves continued

	million barrels									
Crude oil ^{a,b}	2015									Total
	Europe		North America		South America	Africa	Asia	Australasia		
	UK	Rest of Europe	US ^c	Rest of North America			Russia	Rest of Asia ^d		
Subsidiaries										
At 1 January										
Developed	159	95	1,030	9	10	317	–	384	40	2,044
Undeveloped	329	22	664	163	22	120	–	197	19	1,538
	488	117	1,694	172	32	437	–	581	59	3,582
Changes attributable to										
Revisions of previous estimates	(23)	2	(130)	39	(2)	80	–	295	(2)	260
Improved recovery	–	–	15	–	–	2	–	–	–	18
Purchases of reserves-in-place	1	–	–	–	–	6	–	–	–	7
Discoveries and extensions	–	–	3	42	–	2	–	–	–	47
Production ^e	(27)	(14)	(115)	(1)	(5)	(98)	–	(87)	(6)	(353)
Sales of reserves-in-place	(1)	–	–	–	–	–	–	–	–	(1)
	(48)	(12)	(227)	80	(6)	(8)	–	208	(8)	(21)
At 31 December^f										
Developed	141	86	890	46	8	340	–	598	35	2,146
Undeveloped	298	19	577	205	18	89	–	192	16	1,414
	440	106	1,467	252	26	429	–	790	51	3,560
Equity-accounted entities (BP share)^g										
At 1 January										
Developed	–	–	–	–	316	2	2,997	89	–	3,405
Undeveloped	–	–	–	–	314	–	1,933	11	–	2,258
	–	–	–	1	630	2	4,930	101	–	5,663
Changes attributable to										
Revisions of previous estimates	–	–	–	–	9	–	(23)	3	–	(11)
Improved recovery	–	–	–	–	3	–	–	–	–	3
Purchases of reserves-in-place	–	–	–	–	–	–	28	–	–	28
Discoveries and extensions	–	–	–	–	9	–	185	–	–	194
Production	–	–	–	–	(28)	–	(295)	(35)	–	(358)
Sales of reserves-in-place	–	–	–	–	–	–	(1)	–	–	(1)
	–	–	–	–	(8)	–	(105)	(32)	–	(146)
At 31 December^h										
Developed	–	–	–	–	311	2	2,844	68	–	3,225
Undeveloped	–	–	–	–	311	–	1,981	–	–	2,292
	–	–	–	–	622	2	4,825	68	–	5,517
Total subsidiaries and equity-accounted entities (BP share)										
At 1 January										
Developed	159	95	1,030	9	326	319	2,997	473	40	5,448
Undeveloped	329	22	664	164	336	120	1,933	208	19	3,796
	488	117	1,694	173	662	439	4,930	682	59	9,244
At 31 December										
Developed	141	86	890	47	319	342	2,844	666	35	5,371
Undeveloped	298	19	577	205	329	89	1,981	192	16	3,707
	440	106	1,467	252	648	431	4,825	858	51	9,078

^a Crude oil includes condensate and bitumen. Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c Proved reserves in the Prudhoe Bay field in Alaska include an estimated 23 million barrels upon which a net profits royalty will be payable over the life of the field under the terms of the BP Prudhoe Bay Royalty Trust.

^d Production volume recognition methodology for our Technical Service Contract arrangement in Iraq was simplified in 2016 to exclude the impact of oil price movements on lifting imbalances. A minor adjustment has been made to comparative periods back to 2014. There was no impact on 2015 proved reserves totals.

^e Includes 8 million barrels of crude oil in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

^f Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^g Includes 70 million barrels of crude oil in respect of the 1.27% non-controlling interest in Rosneft, including 28 mmbbl held through BP's equity-accounted interest in Taas-Yuryakh Neftegazodobysha.

^h Total proved crude oil reserves held as part of our equity interest in Rosneft is 4,823 million barrels, comprising less than 1 million barrels in Vietnam and Canada, 26 million barrels in Venezuela and 4,797 million barrels in Russia.

Movements in estimated net proved reserves continued

	million barrels									2015
Natural gas liquids ^{a b}	Europe		North America		South America	Africa	Asia	Australasia	Total	
	UK	Rest of Europe	US	Rest of North America			Russia	Rest of Asia		
Subsidiaries										
At 1 January										
Developed	6	13	323	–	11	5	–	–	6	364
Undeveloped	3	1	104	–	28	7	–	–	3	146
	9	14	427	–	39	12	–	–	10	510
Changes attributable to										
Revisions of previous estimates	2	–	(80)	–	–	6	–	–	3	(69)
Improved recovery	–	–	12	–	–	–	–	–	–	12
Purchases of reserves-in-place	–	–	3	–	–	–	–	–	–	4
Discoveries and extensions	–	–	–	–	–	–	–	–	–	–
Production ^c	(2)	(2)	(23)	–	(4)	(3)	–	–	(1)	(34)
Sales of reserves-in-place	–	–	(1)	–	–	–	–	–	–	(1)
	–	(2)	(88)	–	(4)	3	–	–	2	(88)
At 31 December ^d										
Developed	5	11	269	–	7	5	–	–	9	308
Undeveloped	4	1	70	–	28	10	–	–	2	115
	10	12	339	–	35	15	–	–	12	422
Equity-accounted entities (BP share) ^e										
At 1 January										
Developed	–	–	–	–	–	15	30	–	–	46
Undeveloped	–	–	–	–	–	–	16	–	–	16
	–	–	–	–	–	15	46	–	–	62
Changes attributable to										
Revisions of previous estimates	–	–	–	–	–	(3)	1	–	–	(2)
Improved recovery	–	–	–	–	–	–	–	–	–	–
Purchases of reserves-in-place	–	–	–	–	–	–	–	–	–	–
Discoveries and extensions	–	–	–	–	–	–	–	–	–	–
Production	–	–	–	–	–	–	–	–	–	–
Sales of reserves-in-place	–	–	–	–	–	–	–	–	–	–
	–	–	–	–	–	(3)	1	–	–	(2)
At 31 December ^f										
Developed	–	–	–	–	–	13	32	–	–	45
Undeveloped	–	–	–	–	–	–	15	–	–	15
	–	–	–	–	–	13	47	–	–	60
Total subsidiaries and equity-accounted entities (BP share)										
At 1 January										
Developed	6	13	323	–	11	20	30	–	6	410
Undeveloped	3	1	104	–	28	7	16	–	3	163
	9	14	427	–	39	27	46	–	10	572
At 31 December										
Developed	5	11	269	–	7	18	32	–	9	352
Undeveloped	4	1	70	–	28	10	15	–	2	130
	10	12	339	–	35	28	47	–	12	482

^a Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c Excludes NGLs from processing plants in which an interest is held of less than 1 thousand barrels per day for subsidiaries and 4 thousand barrels per day for equity-accounted entities.

^d Includes 11 million barrels of NGL in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

^e Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^f Total proved NGL reserves held as part of our equity interest in Rosneft is 47 million barrels, comprising less than 1 million barrels in Venezuela, Vietnam and Canada, and 47 million barrels in Russia.

Movements in estimated net proved reserves continued

	million barrels									
Total liquids ^{a b}										2015 Total
	Europe	Rest of Europe	North America US ^c	Rest of North America	South America	Africa	Asia Russia	Rest of Asia ^d	Australasia ^e	
Subsidiaries										
At 1 January										
Developed	166	108	1,352	9	21	322	–	384	46	2,407
Undeveloped	332	23	769	163	50	127	–	197	22	1,684
	497	131	2,121	172	71	449	–	581	68	4,092
Changes attributable to										
Revisions of previous estimates	(20)	2	(210)	39	(2)	86	–	295	1	191
Improved recovery	–	–	28	–	–	2	–	–	–	30
Purchases of reserves-in-place	1	–	3	–	–	6	–	–	–	11
Discoveries and extensions	–	–	4	42	–	2	–	–	–	48
Production ^g	(29)	(16)	(138)	(1)	(8)	(101)	–	(87)	(7)	(387)
Sales of reserves-in-place	(1)	–	(1)	–	–	–	–	–	–	(2)
	(48)	(14)	(315)	80	(10)	(5)	–	208	(6)	(109)
At 31 December ^f										
Developed	147	98	1,159	46	15	346	–	598	45	2,453
Undeveloped	302	20	647	205	46	99	–	192	18	1,529
	449	117	1,806	252	61	444	–	790	63	3,982
Equity-accounted entities (BP share) ^g										
At 1 January										
Developed	–	–	–	–	316	17	3,028	89	–	3,451
Undeveloped	–	–	–	–	314	–	1,949	11	–	2,274
	–	–	–	1	630	17	4,976	101	–	5,725
Changes attributable to										
Revisions of previous estimates	–	–	–	–	9	(3)	(22)	3	–	(13)
Improved recovery	–	–	–	–	3	–	–	–	–	3
Purchases of reserves-in-place	–	–	–	–	–	–	28	–	–	28
Discoveries and extensions	–	–	–	–	9	–	185	–	–	194
Production	–	–	–	–	(28)	–	(295)	(35)	–	(358)
Sales of reserves-in-place	–	–	–	–	–	–	(1)	–	–	(1)
	–	–	–	(1)	(8)	(3)	(104)	(32)	–	(147)
At 31 December ^{h i}										
Developed	–	–	–	–	311	14	2,876	68	–	3,270
Undeveloped	–	–	–	–	312	–	1,996	–	–	2,307
	–	–	–	–	622	14	4,872	68	–	5,577
Total subsidiaries and equity-accounted entities (BP share)										
At 1 January										
Developed	166	108	1,352	9	337	339	3,028	473	46	5,858
Undeveloped	332	23	769	164	364	127	1,949	208	22	3,958
	497	131	2,121	173	701	466	4,976	682	68	9,817
At 31 December										
Developed	147	98	1,159	47	326	360	2,876	666	45	5,723
Undeveloped	302	20	647	205	357	99	1,996	192	18	3,836
	449	117	1,806	252	684	459	4,872	858	63	9,560

^a Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c Proved reserves in the Prudhoe Bay field in Alaska include an estimated 23 million barrels of oil equivalent upon which a net profits royalty will be payable, over the life of the field under the terms of the BP Prudhoe Bay Royalty Trust.

^d Production volume recognition methodology for our Technical Service Contract arrangement in Iraq was simplified in 2016 to exclude the impact of oil price movements on lifting imbalances. A minor adjustment has been made to comparative periods back to 2014. There was no impact on 2015 proved reserves totals.

^e Excludes NGLs from processing plants in which an interest is held of less than 1 thousand barrels per day for subsidiaries and 4 thousand barrels per day for equity-accounted entities.

^f Also includes 19 million barrels in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

^g Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^h Includes 70 million barrels in respect of the non-controlling interest in Rosneft, including 28 mmbbl held through BP's equity-accounted interest in Taas-Yuryakh Neftegazodobysha.

ⁱ Total proved liquid reserves held as part of our equity interest in Rosneft is 4,871 million barrels, comprising 1 million barrels in Canada, 26 million barrels in Venezuela, less than 1 million barrels in Vietnam and 4,844 million barrels in Russia.

Movements in estimated net proved reserves continued

Natural gas ^{a b}	billion cubic feet									
	Europe		North America		South America	Africa	Asia		Australasia	2015 Total
	UK	Rest of Europe	US	Rest of North America			Russia	Rest of Asia		
Subsidiaries										
At 1 January										
Developed	382	300	7,168	17	2,352	901	–	1,688	3,316	16,124
Undeveloped	386	19	2,447	–	6,313	1,597	–	3,892	1,719	16,372
	768	318	9,615	17	8,666	2,497	–	5,580	5,035	32,496
Changes attributable to										
Revisions of previous estimates	(12)	14	(1,120)	(13)	132	203	–	(165)	13	(948)
Improved recovery	4	–	432	–	–	7	–	–	–	443
Purchases of reserves-in-place	–	–	65	–	29	554	–	–	–	648
Discoveries and extensions	–	–	5	–	–	174	–	–	–	179
Production ^c	(65)	(44)	(628)	(4)	(709)	(248)	–	(157)	(297)	(2,151)
Sales of reserves-in-place	(5)	–	(6)	–	(58)	(35)	–	–	–	(104)
	(77)	(30)	(1,252)	(17)	(605)	654	–	(322)	(284)	(1,933)
At 31 December ^d										
Developed	348	274	6,257	–	2,071	847	–	1,803	3,408	15,009
Undeveloped	343	14	2,105	–	5,989	2,305	–	3,455	1,343	15,553
	691	288	8,363	–	8,060	3,152	–	5,257	4,751	30,563
Equity-accounted entities (BP share) ^e										
At 1 January										
Developed	–	–	–	1	1,228	400	4,674	60	–	6,363
Undeveloped	–	–	–	1	717	–	5,111	9	–	5,837
	–	–	–	1	1,945	400	9,785	69	–	12,200
Changes attributable to										
Revisions of previous estimates	–	–	–	(1)	81	(14)	1,604	(2)	–	1,669
Improved recovery	–	–	–	–	8	–	–	–	–	8
Purchases of reserves-in-place	–	–	–	–	–	–	5	–	–	5
Discoveries and extensions	–	–	–	–	209	–	175	–	–	384
Production ^c	–	–	–	–	(182)	–	(430)	(19)	–	(632)
Sales of reserves-in-place	–	–	–	–	(1)	–	–	–	–	(1)
	–	–	–	(1)	116	(14)	1,354	(21)	–	1,434
At 31 December ^{f g}										
Developed	–	–	–	1	1,463	386	4,962	44	–	6,856
Undeveloped	–	–	–	–	598	–	6,176	4	–	6,778
	–	–	–	1	2,061	386	11,139	48	–	13,634
Total subsidiaries and equity-accounted entities (BP share)										
At 1 January										
Developed	382	300	7,168	18	3,581	1,301	4,674	1,748	3,316	22,487
Undeveloped	386	19	2,447	1	7,030	1,597	5,111	3,901	1,719	22,209
	768	318	9,615	18	10,610	2,897	9,785	5,648	5,035	44,695
At 31 December										
Developed	348	274	6,257	1	3,534	1,233	4,962	1,847	3,408	21,865
Undeveloped	343	14	2,105	–	6,587	2,305	6,176	3,459	1,343	22,331
	691	288	8,363	1	10,121	3,538	11,139	5,305	4,751	44,197

^a Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c Includes 175 billion cubic feet of natural gas consumed in operations, 146 billion cubic feet in subsidiaries, 29 billion cubic feet in equity-accounted entities.

^d Includes 2,359 billion cubic feet of natural gas in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

^e Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^f Includes 129 billion cubic feet of natural gas in respect of the 0.23% non-controlling interest in Rosneft including 5 billion cubic feet held through BP's equity-accounted interest in Taas-Yuryakh Neftegazodobcha.

^g Total proved gas reserves held as part of our equity interest in Rosneft is 11,169 billion cubic feet, comprising 1 billion cubic feet in Canada, 13 billion cubic feet in Venezuela, 22 billion cubic feet in Vietnam and 11,133 billion cubic feet in Russia.

Movements in estimated net proved reserves continued

Total hydrocarbons ^{a,b}	million barrels of oil equivalent ^c										2015
	Europe		North America		South America	Africa	Asia	Australasia	Total		
	UK	Rest of Europe	US ^d	Rest of North America			Russia	Rest of Asia ^e			
Subsidiaries											
At 1 January											
Developed	232	160	2,588	12	426	477	–	675	618		5,187
Undeveloped	398	26	1,191	163	1,139	403	–	868	319		4,507
	630	186	3,779	175	1,565	880	–	1,543	937		9,695
Changes attributable to											
Revisions of previous estimates	(22)	4	(403)	36	21	121	–	267	4		27
Improved recovery	1	–	102	–	–	3	–	–	–		106
Purchases of reserves-in-place	1	–	15	–	5	102	–	–	–		122
Discoveries and extensions	–	–	4	42	–	32	–	–	–		79
Production ^g	(40)	(23)	(247)	(2)	(130)	(144)	–	(114)	(58)		(758)
Sales of reserves-in-place	(1)	–	(2)	–	(10)	(6)	–	–	–		(19)
	(62)	(19)	(531)	77	(114)	108	–	153	(55)		(443)
At 31 December ^h											
Developed	207	145	2,238	46	373	492	–	909	632		5,041
Undeveloped	362	22	1,010	205	1,078	496	–	788	250		4,211
	568	167	3,248	252	1,451	988	–	1,696	882		9,252
Equity-accounted entities (BP share)ⁱ											
At 1 January											
Developed	–	–	–	–	528	86	3,834	100	–		4,548
Undeveloped	–	–	–	1	438	–	2,830	13	–		3,280
	–	–	–	1	965	86	6,663	112	–		7,828
Changes attributable to											
Revisions of previous estimates	–	–	–	(1)	23	(5)	255	3	–		274
Improved recovery	–	–	–	–	5	–	–	–	–		5
Purchases of reserves-in-place	–	–	–	–	–	–	29	–	–		29
Discoveries and extensions	–	–	–	–	45	–	215	–	–		260
Production ^g	–	–	–	–	(60)	–	(369)	(39)	–		(467)
Sales of reserves-in-place	–	–	–	–	–	–	(1)	–	–		(1)
	–	–	–	(1)	12	(5)	129	(36)	–		100
At 31 December ^{h,k}											
Developed	–	–	–	–	563	81	3,732	76	–		4,452
Undeveloped	–	–	–	–	415	–	3,061	1	–		3,476
	–	–	–	–	978	81	6,792	77	–		7,928
Total subsidiaries and equity-accounted entities (BP share)											
At 1 January											
Developed	232	160	2,588	12	954	563	3,834	775	618		9,735
Undeveloped	398	26	1,191	164	1,576	403	2,830	881	319		7,788
	630	186	3,779	176	2,530	966	6,663	1,656	937		17,523
At 31 December											
Developed	207	145	2,238	47	936	573	3,732	984	632		9,493
Undeveloped	362	22	1,010	205	1,493	496	3,061	788	250		7,687
	568	167	3,248	252	2,429	1,069	6,792	1,773	882		17,180

^a Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c 5.8 billion cubic feet of natural gas = 1 million barrels of oil equivalent.

^d Proved reserves in the Prudhoe Bay field in Alaska include an estimated 23 million barrels of oil equivalent upon which a net profits royalty will be payable, over the life of the field under the terms of the BP Prudhoe Bay Royalty Trust.

^e Production volume recognition methodology for our Technical Service Contract arrangement in Iraq was simplified in 2016 to exclude the impact of oil price movements on lifting imbalances. A minor adjustment has been made to comparative periods back to 2014. There was no impact on 2015 proved reserves totals.

^f Excludes NGLs from processing plants in which an interest is held of less than 1 thousand barrels per day for subsidiaries and 4 thousand barrels per day for equity-accounted entities.

^g Includes 30 million barrels of oil equivalent of natural gas consumed in operations, 25 million barrels of oil equivalent in subsidiaries, 5 million barrels of oil equivalent in equity-accounted entities.

^h Includes 425 million barrels of oil equivalent in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

ⁱ Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^j Includes 70 million barrels in respect of the non-controlling interest in Rosneft, including 28 mmbbl held through BP's equity-accounted interest in Taas-Yuryakh Neftegazodobycha.

^k Total proved reserves held as part of our equity interest in Rosneft is 6,796 million barrels of oil equivalent, comprising 1 million barrels of oil equivalent in Canada, 28 million barrels of oil equivalent in Venezuela, 4 million barrels of oil equivalent in Vietnam and 6,764 million barrels of oil equivalent in Russia.

Movements in estimated net proved reserves continued

	million barrels									
Crude oil ^{a b}										2016
	Europe	Rest of Europe	US ^c	Rest of North America	South America	Africa	Asia	Rest of Asia	Australasia	Total
Subsidiaries	UK						Russia			
At 1 January	141	86	890	46	8	340	–	598	35	2,146
Developed	298	19	577	205	18	89	–	192	16	1,414
Undeveloped	440	106	1,467	252	26	429	–	790	51	3,560
Changes attributable to										
Revisions of previous estimates ^d	13	–	(30)	–	(2)	22	–	543	2	548
Improved recovery	–	–	1	–	–	3	–	70	–	74
Purchases of reserves-in-place	3	–	3	–	–	–	–	25	1	32
Discoveries and extensions	2	–	–	4	–	–	–	–	–	6
Production ^e	(29)	(9)	(119)	(5)	(4)	(96)	–	(75)	(6)	(341)
Sales of reserves-in-place	–	(97)	(1)	–	–	–	–	(1)	(2)	(102)
	(11)	(106)	(145)	(1)	(6)	(71)	–	562	(5)	218
At 31 December ^f	155	–	826	42	9	317	–	1,107	32	2,487
Developed	274	–	497	209	11	42	–	245	14	1,291
Undeveloped	429	–	1,322	251	20	358	–	1,352	46	3,778
Equity-accounted entities (BP share) ^g										
At 1 January	–	–	–	–	311	2	2,844	68	–	3,225
Developed	–	–	–	–	311	–	1,981	–	–	2,292
Undeveloped	–	–	–	–	622	2	4,825	68	–	5,517
Changes attributable to										
Revisions of previous estimates	–	–	–	–	(2)	–	33	13	–	45
Improved recovery	–	–	–	–	1	–	4	–	–	5
Purchases of reserves-in-place	–	116	–	–	36	–	456	–	–	609
Discoveries and extensions	–	–	–	–	16	–	285	–	–	301
Production	–	(3)	–	–	(28)	–	(305)	(37)	–	(373)
Sales of reserves-in-place	–	–	–	–	–	–	(2)	(1)	–	(2)
	–	114	–	–	24	–	471	(25)	–	584
At 31 December ^h	–	45	–	–	321	1	3,162	43	–	3,573
Developed	–	69	–	–	325	–	2,134	1	–	2,529
Undeveloped	–	114	–	–	646	1	5,296	44	–	6,101
Total subsidiaries and equity-accounted entities (BP share)										
At 1 January	141	86	890	47	319	342	2,844	666	35	5,371
Developed	298	19	577	205	329	89	1,981	192	16	3,707
Undeveloped	440	106	1,467	252	648	431	4,825	858	51	9,078
At 31 December	155	45	826	42	330	318	3,162	1,150	32	6,060
Developed	274	69	497	209	336	42	2,134	246	14	3,819
Undeveloped	429	114	1,322	251	666	360	5,296	1,395	46	9,879

^a Crude oil includes condensate and bitumen. Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c Proved reserves in the Prudhoe Bay field in Alaska include an estimated 9 million barrels upon which a net profits royalty will be payable over the life of the field under the terms of the BP Prudhoe Bay Royalty Trust.

^d Rest of Asia includes additions from Abu Dhabi ADCO concession.

^e Includes 6 million barrels of crude oil in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

^f Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^g Includes 347 million barrels of crude oil in respect of the 6.58% non-controlling interest in Rosneft, including 28 mmbbl held through BP's equity-accounted interest in Taas-Yuryakh Neftegazodobycha.

^h Total proved crude oil reserves held as part of our equity interest in Rosneft is 5,330 million barrels, comprising less than 1 million barrels in Vietnam and Canada, 62 million barrels in Venezuela and 5,268 million barrels in Russia.

Movements in estimated net proved reserves continued

	million barrels									2016
Natural gas liquids ^{a,b}	Europe		North America		South America	Africa	Asia	Australasia	Total	
	UK	Rest of Europe	US	Rest of North America			Russia	Rest of Asia		
Subsidiaries										
At 1 January	5	11	269	–	7	5	–	–	9	308
Developed	4	1	70	–	28	10	–	–	2	115
Undeveloped	10	12	339	–	35	15	–	–	12	422
Changes attributable to										
Revisions of previous estimates	7	–	(24)	–	–	1	–	–	–	(14)
Improved recovery	–	–	3	–	–	–	–	–	–	3
Purchases of reserves-in-place	1	–	4	–	–	–	–	–	–	6
Discoveries and extensions	–	–	–	–	–	–	–	–	–	–
Production ^c	(2)	(1)	(24)	–	(2)	(2)	–	–	(1)	(34)
Sales of reserves-in-place	–	(10)	–	–	–	–	–	–	–	(10)
	7	(12)	(40)	–	(2)	(1)	–	–	(1)	(49)
At 31 December ^d										
Developed	13	–	226	–	5	13	–	–	9	266
Undeveloped	3	–	73	–	28	1	–	–	2	107
	16	–	299	–	33	14	–	–	11	373
Equity-accounted entities (BP share) ^e										
At 1 January	–	–	–	–	–	13	32	–	–	45
Developed	–	–	–	–	–	–	15	–	–	15
Undeveloped	–	–	–	–	–	13	47	–	–	60
Changes attributable to										
Revisions of previous estimates	–	–	–	–	–	(2)	18	–	–	16
Improved recovery	–	–	–	–	–	–	–	–	–	–
Purchases of reserves-in-place	–	5	–	–	–	–	–	–	–	5
Discoveries and extensions	–	–	–	–	–	–	–	–	–	–
Production	–	–	–	–	–	–	–	–	–	–
Sales of reserves-in-place	–	–	–	–	–	–	–	–	–	–
	–	5	–	–	–	(2)	18	–	–	21
At 31 December ^f										
Developed	–	3	–	–	–	11	50	–	–	65
Undeveloped	–	2	–	–	–	–	15	–	–	17
	–	5	–	–	–	11	65	–	–	81
Total subsidiaries and equity-accounted entities (BP share)										
At 1 January	5	11	269	–	7	18	32	–	9	352
Developed	4	1	70	–	28	10	15	–	2	130
Undeveloped	10	12	339	–	35	28	47	–	12	482
At 31 December										
Developed	13	3	226	–	5	24	50	–	9	331
Undeveloped	3	2	73	–	28	1	15	–	2	123
	16	5	299	–	33	25	65	–	11	454

^a Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c Excludes NGLs from processing plants in which an interest is held of less than 1 thousand barrels per day for subsidiaries and 3 thousand barrels per day for equity-accounted entities.

^d Includes 10 million barrels of NGL in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

^e Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^f Total proved NGL reserves held as part of our equity interest in Rosneft is 65 million barrels, comprising less than 1 million barrels in Venezuela, Vietnam and Canada, and 65 million barrels in Russia.

Movements in estimated net proved reserves continued

	million barrels									
Total liquids ^{a b}										2016 Total
	Europe	Rest of Europe	North America US ^c	Rest of North America	South America	Africa	Asia Russia	Rest of Asia	Australasia	
Subsidiaries										
At 1 January										
Developed	147	98	1,159	46	15	346	–	598	45	2,453
Undeveloped	303	20	647	205	46	99	–	192	18	1,529
	449	117	1,806	252	61	444	–	790	63	3,982
Changes attributable to										
Revisions of previous estimates ^d	20	–	(54)	–	(2)	23	–	543	3	533
Improved recovery	–	–	5	–	–	3	–	70	–	78
Purchases of reserves-in-place	5	–	7	–	–	–	–	25	1	38
Discoveries and extensions	2	–	–	4	–	–	–	–	–	6
Production ^e	(31)	(10)	(143)	(5)	(6)	(98)	–	(75)	(7)	(375)
Sales of reserves-in-place	–	(108)	(1)	–	–	–	–	(1)	(2)	(112)
	(4)	(117)	(185)	(1)	(8)	(72)	–	562	(5)	168
At 31 December ^f										
Developed	168	–	1,051	42	14	330	–	1,107	42	2,753
Undeveloped	277	–	569	209	39	43	–	245	16	1,398
	445	–	1,621	251	53	372	–	1,352	57	4,151
Equity-accounted entities (BP share) ^g										
At 1 January										
Developed	–	–	–	–	311	14	2,876	68	–	3,270
Undeveloped	–	–	–	–	312	–	1,996	–	–	2,307
	–	–	–	–	622	14	4,872	68	–	5,577
Changes attributable to										
Revisions of previous estimates	–	–	–	–	(2)	(2)	51	13	–	61
Improved recovery	–	–	–	–	1	–	4	–	–	5
Purchases of reserves-in-place	–	122	–	–	36	–	456	–	–	614
Discoveries and extensions	–	–	–	–	16	–	285	–	–	301
Production	–	(3)	–	–	(28)	–	(305)	(37)	–	(374)
Sales of reserves-in-place	–	–	–	–	–	–	(2)	(1)	–	(2)
	–	119	–	–	24	(2)	489	(25)	–	605
At 31 December ^{h i}										
Developed	–	48	–	–	321	12	3,213	43	–	3,637
Undeveloped	–	71	–	–	325	–	2,148	1	–	2,545
	–	119	–	–	646	12	5,361	44	–	6,183
Total subsidiaries and equity-accounted entities (BP share)										
At 1 January										
Developed	147	98	1,159	47	326	360	2,876	666	45	5,723
Undeveloped	302	20	647	205	357	99	1,996	192	18	3,836
	449	117	1,806	252	684	459	4,872	858	63	9,560
At 31 December										
Developed	168	48	1,051	42	335	342	3,213	1,150	42	6,390
Undeveloped	277	71	569	209	364	43	2,148	246	16	3,943
	445	119	1,621	251	699	385	5,361	1,395	57	10,333

^a Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c Proved reserves in the Prudhoe Bay field in Alaska include an estimated 9 million barrels of oil equivalent upon which a net profits royalty will be payable, over the life of the field under the terms of the BP Prudhoe Bay Royalty Trust.

^d Rest of Asia includes additions from Abu Dhabi ADCO concession.

^e Excludes NGLs from processing plants in which an interest is held of less than 1 thousand barrels per day for subsidiaries and 3 thousand barrels per day for equity-accounted entities.

^f Also includes 16 million barrels in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

^g Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^h Includes 347 million barrels in respect of the non-controlling interest in Rosneft, including 28 mmbbl held through BP's equity-accounted interest in Taas-Yuryakh Neftegazodobycha.

ⁱ Total proved liquid reserves held as part of our equity interest in Rosneft is 5,395 million barrels, comprising 1 million barrels in Canada, 62 million barrels in Venezuela, less than 1 million barrels in Vietnam and 5,333 million barrels in Russia.

Movements in estimated net proved reserves continued

	billion cubic feet									
	2016									
Natural gas ^{a b}	Europe		North America		South America	Africa	Asia		Australasia	Total
	UK	Rest of Europe	US	Rest of North America			Russia	Rest of Asia		
Subsidiaries										
At 1 January										
Developed	348	274	6,257	–	2,071	847	–	1,803	3,408	15,009
Undeveloped	343	14	2,105	–	5,989	2,305	–	3,455	1,343	15,553
	691	288	8,363	–	8,060	3,152	–	5,257	4,751	30,563
Changes attributable to										
Revisions of previous estimates	133	–	(231)	3	(1,042)	(19)	–	548	396	(211)
Improved recovery	–	–	469	–	42	1	–	22	–	534
Purchases of reserves-in-place	95	–	91	–	–	–	–	–	252	438
Discoveries and extensions	–	–	1	–	355	43	–	–	–	399
Production ^c	(71)	(33)	(676)	(4)	(624)	(219)	–	(152)	(306)	(2,085)
Sales of reserves-in-place	–	(256)	(2)	–	(37)	–	–	(17)	(439)	(750)
	158	(288)	(348)	–	(1,306)	(194)	–	401	(97)	(1,675)
At 31 December ^d										
Developed	499	–	5,447	–	1,784	767	–	1,890	3,012	13,398
Undeveloped	350	–	2,567	–	4,970	2,191	–	3,769	1,643	15,490
	848	–	8,014	–	6,755	2,958	–	5,659	4,654	28,888
Equity-accounted entities (BP share) ^e										
At 1 January										
Developed	–	–	–	1	1,463	386	4,962	44	–	6,856
Undeveloped	–	–	–	–	598	–	6,176	4	–	6,778
	–	–	–	1	2,061	386	11,139	48	–	13,634
Changes attributable to										
Revisions of previous estimates	–	–	–	–	62	34	736	5	–	836
Improved recovery	–	–	–	–	1	–	10	–	–	11
Purchases of reserves-in-place	–	115	–	–	19	–	81	–	–	216
Discoveries and extensions	–	–	–	–	128	–	343	–	–	471
Production ^c	–	(4)	–	–	(190)	(8)	(461)	(15)	–	(680)
Sales of reserves-in-place	–	–	–	–	–	–	(1)	(8)	–	(8)
	–	110	–	–	20	26	709	(18)	–	846
At 31 December ^{f g}										
Developed	–	89	–	–	1,546	412	5,544	26	–	7,617
Undeveloped	–	21	–	–	534	–	6,304	4	–	6,863
	–	110	–	1	2,080	412	11,847	30	–	14,480
Total subsidiaries and equity-accounted entities (BP share)										
At 1 January										
Developed	348	274	6,257	1	3,534	1,233	4,962	1,847	3,408	21,865
Undeveloped	343	14	2,105	–	6,587	2,305	6,176	3,459	1,343	22,331
	691	288	8,363	1	10,121	3,538	11,139	5,305	4,751	44,197
At 31 December										
Developed	499	89	5,447	–	3,330	1,179	5,544	1,916	3,012	21,015
Undeveloped	350	21	2,567	–	5,505	2,191	6,304	3,772	1,643	22,353
	848	110	8,014	–	8,835	3,370	11,847	5,688	4,654	43,368

^a Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c Includes 176 billion cubic feet of natural gas consumed in operations, 145 billion cubic feet in subsidiaries, 31 billion cubic feet in equity-accounted entities.

^d Includes 2,026 billion cubic feet of natural gas in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

^e Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^f Includes 300 billion cubic feet of natural gas in respect of the 2.53% non-controlling interest in Rosneft including 3 billion cubic feet held through BP's equity-accounted interest in Taas-Yuryakh Neftegazodobcha.

^g Total proved gas reserves held as part of our equity interest in Rosneft is 11,900 billion cubic feet, comprising 1 billion cubic feet in Canada, 33 billion cubic feet in Venezuela, 23 billion cubic feet in Vietnam and 11,843 billion cubic feet in Russia.

Movements in estimated net proved reserves continued

	million barrels of oil equivalent ^c									
Total hydrocarbons ^{a,b}										2016 Total
	Europe	Rest of Europe	North America US ^d	Rest of North America	South America	Africa	Asia	Rest of Asia	Australasia	
Subsidiaries	UK						Russia			
At 1 January	207	145	2,238	46	373	492	–	909	632	5,041
Developed	362	22	1,010	205	1,078	496	–	788	250	4,211
Undeveloped	568	167	3,248	252	1,451	988	–	1,696	882	9,252
Changes attributable to										
Revisions of previous estimates ^e	43	–	(94)	1	(181)	20	–	637	71	497
Improved recovery	–	–	86	–	7	3	–	74	–	170
Purchases of reserves-in-place	21	–	23	–	–	–	–	25	44	113
Discoveries and extensions	2	–	–	4	61	8	–	–	–	75
Production ^g	(43)	(16)	(260)	(5)	(114)	(136)	–	(101)	(60)	(735)
Sales of reserves-in-place	–	(152)	(1)	–	(7)	–	–	(4)	(78)	(241)
	23	(167)	(245)	(1)	(233)	(105)	–	631	(22)	(121)
At 31 December ^h										
Developed	254	–	1,990	42	321	462	–	1,433	561	5,063
Undeveloped	338	–	1,012	209	896	420	–	895	299	4,068
	592	–	3,002	251	1,217	882	–	2,327	860	9,131
Equity-accounted entities (BP share) ⁱ										
At 1 January	–	–	–	–	563	81	3,732	76	–	4,452
Developed	–	–	–	–	415	–	3,061	1	–	3,476
Undeveloped	–	–	–	–	978	81	6,792	77	–	7,928
Changes attributable to										
Revisions of previous estimates	–	–	–	–	9	4	178	14	–	205
Improved recovery	–	–	–	–	1	–	6	–	–	7
Purchases of reserves-in-place	–	142	–	–	39	–	470	–	–	652
Discoveries and extensions	–	–	–	–	38	–	344	–	–	382
Production ^g	–	(3)	–	–	(61)	(2)	(385)	(40)	–	(491)
Sales of reserves-in-place	–	–	–	–	–	–	(2)	(2)	–	(4)
	–	138	–	–	27	2	611	(28)	–	751
At 31 December ^{h,k}										
Developed	–	63	–	–	588	83	4,168	47	–	4,951
Undeveloped	–	75	–	–	417	–	3,235	1	–	3,729
	–	138	–	–	1,005	83	7,404	49	–	8,679
Total subsidiaries and equity-accounted entities (BP share)										
At 1 January	207	145	2,238	47	936	573	3,732	984	632	9,493
Developed	362	22	1,010	205	1,493	496	3,061	788	250	7,687
Undeveloped	568	167	3,248	252	2,429	1,069	6,792	1,773	882	17,180
At 31 December										
Developed	254	63	1,990	42	909	545	4,168	1,480	561	10,014
Undeveloped	338	75	1,012	209	1,313	420	3,235	896	299	7,797
	592	138	3,002	251	2,222	966	7,404	2,376	860	17,810

^a Proved reserves exclude royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c 5.8 billion cubic feet of natural gas = 1 million barrels of oil equivalent.

^d Proved reserves in the Prudhoe Bay field in Alaska include an estimated 9 million barrels of oil equivalent upon which a net profits royalty will be payable, over the life of the field under the terms of the BP Prudhoe Bay Royalty Trust.

^e Rest of Asia includes additions from Abu Dhabi ADCO concession.

^f Excludes NGLs from processing plants in which an interest is held of less than 1 thousand barrels per day for subsidiaries and 3 thousand barrels per day for equity-accounted entities.

^g Includes 30 million barrels of oil equivalent of natural gas consumed in operations, 25 million barrels of oil equivalent in subsidiaries, 5 million barrels of oil equivalent in equity-accounted entities.

^h Includes 366 million barrels of oil equivalent in respect of the 30% non-controlling interest in BP Trinidad and Tobago LLC.

ⁱ Volumes of equity-accounted entities include volumes of equity-accounted investments of those entities.

^j Includes 402 million barrels in respect of the non-controlling interest in Rosneft, including 29 mmbbl held through BP's equity-accounted interest in Taas-Yuryakh Neftegazodobycha.

^k Total proved reserves held as part of our equity interest in Rosneft is 7,447 million barrels of oil equivalent, comprising 1 million barrels of oil equivalent in Canada, 68 million barrels of oil equivalent in Venezuela, 4 million barrels of oil equivalent in Vietnam and 7,375 million barrels of oil equivalent in Russia.

Group hydrocarbon data

BP's net production by country - crude oil^a and natural gas liquids

						thousand barrels per day				
						BP net share of production ^b				
						Natural gas liquids				
	2012	2013	2014	2015	Crude oil 2016	2012	2013	2014	2015	2016
Subsidiaries										
UK ^{c, d}	81	58	46	72	79	5	3	2	7	6
Norway ^c	22	31	41	38	24	1	4	5	5	4
Total Rest of Europe	22	31	41	38	24	1	4	5	5	4
Total Europe	103	89	87	110	102	6	7	7	11	10
Alaska ^c	139	137	127	107	107	—	—	—	—	—
Lower 48 onshore ^c	11	12	14	14	12	49	45	45	37	36
Gulf of Mexico deepwater ^c	176	156	206	203	216	15	13	18	19	20
Total US	327	305	347	323	335	64	58	63	56	56
Canada ^e	—	—	—	3	13	1	—	—	—	—
Total Rest of North America	—	—	—	3	13	1	—	—	—	—
Total North America	327	305	347	327	347	65	58	63	56	56
Trinidad & Tobago ^c	8	10	13	12	10	13	12	12	11	8
Brazil ^c	7	7	—	—	—	—	—	—	—	—
Total South America	16	17	13	12	10	13	12	12	11	8
Angola	149	180	181	221	219	—	—	—	—	—
Egypt ^c	36	33	37	42	39	—	—	—	—	—
Algeria	6	3	5	6	5	7	3	5	7	5
Total Africa	191	217	222	270	263	7	3	5	7	5
Azerbaijan ^c	92	96	98	111	105	—	—	—	—	—
Western Indonesia ^c	1	1	2	2	2	—	—	—	—	—
Iraq ^f	39	39	46	85	96	—	—	—	—	—
Other ^c	6	4	2	1	1	2	1	—	—	—
Total Rest of Asia	137	141	147	199	204	2	1	—	1	—
Total Asia	137	141	147	199	204	2	1	—	1	—
Australia ^c	20	19	17	15	15	4	4	3	3	3
Other ^c	1	2	2	2	2	—	—	—	—	—
Total Australasia	22	21	19	17	16	4	4	3	3	3
Total subsidiaries	795	789	834	933	943	96	86	91	88	82
Equity-accounted entities (BP share)										
TNK-BP (Russia, Venezuela, Vietnam) ^{d, g}	857	183	—	—	—	20	4	—	—	—
Rosneft (Russia, Canada, Venezuela, Vietnam) ^{d, h}	—	643	816	809	836	—	7	5	4	4
Abu Dhabi ⁱ	216	231	97	96	101	—	—	—	—	—
Argentina	63	60	62	65	62	3	3	3	3	1
Bolivia	1	2	3	4	4	—	—	—	—	—
Egypt	—	—	—	—	—	5	5	4	3	3
Norway ^c	—	—	—	—	7	—	—	—	—	—
Russia ^c	—	—	—	—	4	—	—	—	—	—
Other	1	1	1	1	1	—	—	—	—	1
Total equity-accounted entities	1,137	1,120	979	974	1,015	27	19	12	10	8
Total subsidiaries and equity-accounted entities	1,932	1,909	1,813	1,908	1,958	123	105	104	99	90

^a Includes condensate

^b Production excludes royalties due to others whether payable in cash or in kind where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^c In 2016, BP increased its interests in Tangguh in Indonesia and the Culzean asset in the UK North Sea, and in certain US onshore assets. It disposed of its interests in the Valhall, Skarv and Ula assets in the Norwegian North Sea and in return received an interest in Aker BP ASA, which operates in Norway. It also disposed of its interests in the Jansz-Lo asset in Australia, and the Sanga Sanga conventional concession in Indonesia. It also decreased its interests in certain Trinidad and US onshore assets.

In 2015, BP acquired an interest in Taas-Yuryakh Neftegazodobycha. It also increased its interest in the North Alexandria and West Mediterranean Deep Water Concessions of the West Nile Delta project in Egypt. It increased its interest in certain UK North Sea, Trinidad, and US onshore assets. It also decreased its interest in certain other assets in the same Regions. In 2014, BP divested its interests in the Endicott and Northstar fields, and 50% of its interests in the Milne Point field, in Alaska, its interest in the US onshore Hugoton upstream operation and its interest in the Polvo asset in Brazil. BP also reduced its interest in certain wells in the US onshore Eagle Ford Shale in south Texas. It increased its interest in the Shah Deniz asset in Azerbaijan, in certain UK North Sea assets, and in certain US onshore assets. In 2013, BP divested its interests in TNK-BP, its interests in the Harding, Devenick, Maclure, Braes and Braemar fields in the North Sea and its interests in the US onshore Moxa upstream operation in Wyoming. It also acquired an interest in Rosneft. In 2012, BP divested its interests in the Gulf of Mexico Marlin, Dorado, King, Horn Mountain, Holstein, Ram Powell and Diana Hoover assets, a portion of its interest in the Gulf of Mexico Mad Dog asset, its interests in the US onshore Jonah and Pinedale upstream operation in Wyoming, and associated gas gathering system, its interests in the Canadian natural gas liquid business, its interests in the Alba and Britannia fields in the UK North Sea, its interests in the Draugen field in the Norwegian Sea, and TNK-BP disposed of its interests in OJSC Novosibirskneftegaz, with interests in Novosibirsk region, Omsk region, and Irkutsk region, and its interests in OJSC Severnoenftegaz, with interests in Novosibirsk region. BP also increased its interest in the US onshore Eagle Ford Shale in south Texas, its interests in certain UK North Sea assets, and in certain US Alaska assets.

^d Volumes relate to six BP-operated fields within ETAP. BP has no interests in the remaining three ETAP fields, which are operated by Shell.

^e All of the production from Canada in Subsidiaries is bitumen.

^f Production volume recognition methodology for our Technical Service Contract arrangement in Iraq has been simplified to exclude the impact of oil price movements on lifting imbalances.

A minor adjustment has been made to comparative periods back to 2014. There is no impact on the financial results.

^g Estimated production for 2013 represents BP's share of TNK-BP's estimated production from 1 January to 20 March, averaged over the full year.

^h 2013 reflects production for the period 21 March to 31 December averaged over the full year.

ⁱ BP holds interests, through associates, in offshore concessions in Abu Dhabi which expire in 2018.

Because of rounding, some totals may not agree exactly with the sum of their component parts.

BP's net production by country - natural gas

	million cubic feet per day				
	BP net share of production ^a				
	2012	2013	2014	2015	2016
Subsidiaries					
UK ^b	414	157	71	155	170
Norway ^b	8	80	102	111	82
Total Rest of Europe	8	80	102	111	82
Total Europe	422	237	173	266	252
Lower 48 onshore ^b	1,499	1,404	1,350	1,353	1,476
Gulf of Mexico deepwater ^b	134	114	159	168	173
Alaska	18	21	11	7	6
Total US	1,651	1,539	1,519	1,528	1,656
Canada	13	11	10	10	10
Total Rest of North America	13	11	10	10	10
Total North America	1,664	1,551	1,529	1,538	1,666
Trinidad & Tobago ^b	2,097	2,221	2,147	1,922	1,689
Total South America	2,097	2,221	2,147	1,922	1,689
Egypt ^b	470	444	406	402	305
Algeria	120	117	107	187	208
Total Africa	590	561	513	589	513
Azerbaijan ^b	158	203	230	219	245
Western Indonesia ^b	59	51	47	48	35
India	313	156	131	113	84
Other ^b	103	81	–	–	–
Total Rest of Asia	633	490	408	380	363
Total Asia	633	490	408	380	363
Australia ^b	435	431	450	447	451
Eastern Indonesia ^b	352	353	364	354	369
	787	784	814	801	820
Total subsidiaries^c	6,193	5,845	5,585	5,495	5,302
Equity-accounted entities (BP share)					
TNK-BP (Russia, Venezuela, Vietnam) ^{b d}	785	184	–	–	–
Rosneft (Russia, Canada, Venezuela, Vietnam) ^{b e}	–	617	1,084	1,195	1,279
Argentina	355	329	323	341	354
Bolivia	34	55	80	93	95
Norway ^b	–	–	–	–	12
Angola	–	8	7	–	18
Western Indonesia	26	22	21	21	15
Total equity-accounted entities^c	1,200	1,216	1,515	1,651	1,773
Total subsidiaries and equity-accounted entities	7,393	7,060	7,100	7,146	7,075

^a Production excludes royalties due to others whether payable in cash or in kind where the royalty owner has a direct interest in the underlying production and the option and ability to make lifting and sales arrangements independently.

^b In 2016, BP increased its interests in Tangguh in Indonesia and the Culzean asset in the UK North Sea, and in certain US onshore assets. It disposed of its interests in the Valhall, Skarv and Ula assets in the Norwegian North Sea and in return received an interest in Aker BP ASA, which operates in Norway. It also disposed of its interests in the Jansz-lo asset in Australia, and the Sanga Sanga concession in Indonesia. It also decreased its interests in certain Trinidad and US onshore assets.

In 2015, BP acquired an interest in Taas-Yuryakh Neftegazodobysha. It also increased its interest in the North Alexandria and West Mediterranean Deep Water Concessions of the West Nile Delta project in Egypt. It increased its interest in certain UK North Sea, Trinidad, and US onshore assets. It also decreased its interest in certain other assets in the same Regions. In 2014, BP divested its interest in the US onshore Hugoton upstream operation. BP also reduced its interest in certain wells in the US onshore Eagle Ford Shale in south Texas. It increased its interest in the Shah Deniz asset in Azerbaijan, in certain UK North Sea assets, and in certain US onshore assets. In 2013, BP divested its interests in TNK-BP, its interests in the Harding, Devenick, Maclure, Braes, Braemar and Sean fields in the North Sea, its interests in the US onshore Moxa upstream operation in Wyoming and its interests in the Yacheng gas field in the South China Sea. It also acquired an interest in Rosneft. In 2012, BP divested its interests in the US Hugoton basin including the Jayhawk NGL plant, its interests in the Gulf of Mexico Marlin, Dorado, King, Horn Mountain, Holstein, Ram Powell and Diana Hoover assets, a portion of its interest in the Gulf of Mexico Mad Dog asset, its interests in the US onshore Jonah and Pinedale upstream operation in Wyoming, its interests in the Sunray and Hemphill gas processing plants in Texas, and associated gas gathering system, its interests in the UK North Sea southern gas fields including associated pipeline infrastructure and the Dimlington terminal (including the integrated Easington terminal), and its interests in the Alba and Britannia fields in the UK North Sea. BP also increased its interest in the US onshore Eagle Ford Shale in south Texas, and its interests in certain UK North Sea assets.

^c Natural gas production volumes exclude gas consumed in operations within the lease boundaries of the producing field, but the related reserves are included in the group's reserves.

^d Estimated production for 2013 represents BP's share of TNK-BP's estimated production from 1 January to 20 March, averaged over the full year.

^e 2013 reflects production for the period 21 March to 31 December, averaged over the full year.

Because of rounding, some totals may not agree exactly with the sum of their component parts.

Group production interests – total hydrocarbons

Oil and natural gas production (net of royalty)

	thousand barrels oil equivalent per day				
	2012	2013	2014	2015	2016
US	675	628	673	643	676
Europe	182	137	123	167	165
TNK-BP (Russia, Venezuela, Vietnam)	1,012	218	–	–	–
Rosneft (Russia, Canada, Venezuela, Vietnam)	–	756	1,008	1,019	1,060
Rest of world	1,462	1,491	1,337	1,410	1,366
Total group including equity-accounted entities	3,331	3,230	3,141	3,239	3,268

Because of rounding, some totals may not agree exactly with the sum of their component parts.

BP average liquids realizations^a

	\$ per barrel				
US	96.35	91.88	84.24	44.94	36.25
Europe	109.05	104.77	93.84	49.71	40.53
Rest of world ^b	105.84	104.20	92.25	48.52	39.29
BP average	102.10	99.24	88.88	47.32	38.27

^a Crude oil, condensate, bitumen and NGLs.

^b Production volumen recognition methodology for our Technical Service Contract arrangement in Iraq has been simplified to exclude the impact of oil price movements on lifting imbalances. A minor adjustment has been made to the comparative periods back to 2014. There is no impact on the financial results.

BP average natural gas realizations

	\$ per thousand cubic feet				
US	2.32	3.07	3.80	2.10	1.90
Europe	8.63	9.68	8.18	7.27	4.40
Rest of world	5.33	5.97	6.35	4.25	3.19
BP average	4.75	5.35	5.70	3.80	2.84

Liquefied natural gas projects

Liquefaction project participation

Country	Project/train	Gross capacity (mtpa)	BP % equity	BP net capacity (mtpa)	Markets served
Trinidad & Tobago	Atlantic LNG Train 1	3.3	34.0	1.1	US, Spain, South America
	Atlantic LNG Trains 2-3	6.7	42.5	2.8	US, Spain, South America
	Atlantic LNG Train 4	5.2	37.8	2.0	US, Spain, South America
	North West Shelf Trains 1-5	16.3	16.7	2.7	Japan, China, S. Korea
Australia	SEGAS LNG Train 1	5.0	—	—	Spain
Egypt	Tangguh Trains 1-2	7.6	37.2	2.8	China, S. Korea, Mexico, Japan
Indonesia	ADGAS Trains 1-3	6.0	10.0	0.6	Japan
Abu Dhabi	Angola LNG	5.2	13.6	0.7	Global
Angola					
Total		55.3		12.7	

Regasification terminal participation

Country	Facility	Gross capacity (million standard cubic feet/d)	BP % equity	BP net ownership (million standard cubic feet/d)	BP capacity rights (million standard cubic feet/d)
US	Cove Point	960	—	—	320
UK	Isle of Grain Phase 1	450	—	—	225
Italy	Adriatic LNG (Rovigo)	800	—	—	100
Total		2,210		—	645

Equity gas production into LNG plant

	Trinidad & Tobago Atlantic LNG Trains 1-4	Australia North West Shelf Trains 1-5	Indonesia Bontang Tangguh Ph1	Angola Angola LNG	Egypt ^a SEGAS Train 1	BP total (million standard cubic feet/d)
2012	1,575	353	428	—	80	2,436
2013	1,652	344	419	—	80	2,495
2014	1,431	373	364	—	59	2,227
2015	1,352	369	423	—	—	2,144
2016	1,095	373	418	18	—	1,904

^a Arrangements to supply gas to LNG plants were not in place in 2015 and 2016.

LNG shipping^a

Vessel name	Status	Ownership	Delivery date	Capacity (m ³)
British Trader	Operational	Operating lease	4Q 2002	138,000
British Innovator	Operational	Operating lease	1Q 2003	138,000
British Merchant	Operational	Operating lease	3Q 2003	138,000
British Emerald	Operational	Operating lease	3Q 2007	155,000
British Ruby	Operational	Operating lease	3Q 2008	155,000
British Sapphire	Operational	Operating lease	3Q 2008	155,000
British Diamond	Operational	Operating lease	4Q 2008	155,000
Celestine River	Operational	Time-charter	2Q 2012	148,000
Total				1,182,000

^a Excludes shipping owned and operated within joint-arrangement projects.

Exploration interests

By geographical area

Oil and natural gas acreage at 31 December

Oil and natural gas acreage at 31 December			Thousands of acres									
			Europe		North America		South America	Africa	Asia		Australasia ^a	Total ^a
			UK	Rest of Europe	US	Rest of North America			Russia ^b	Rest of Asia		
2016												
Developed	- gross		133	37	6,462	166	1,330	705	5,024	1,536	173	15,566
	- net		76	11	3,452	75	412	277	941	273	41	5,558
Undeveloped ^c	- gross		1,383	1,360	5,883	12,806	20,757	31,345	380,441	10,018	11,617	475,610
	- net		978	517	4,318	6,353	6,404	21,801	74,103	2,501	6,340	123,315
2015												
Developed	- gross		128	40	6,226	237	1,386	655	4,828	866	194	14,558
	- net		74	17	3,366	111	417	255	908	267	36	5,452
Undeveloped ^c	- gross		1,500	1,501	6,662	9,712	22,046	32,692	378,688	7,395	15,661	475,856
	- net		1,056	571	4,855	5,566	6,619	21,210	73,971	2,518	9,743	126,108
2014												
Developed	- gross		131	39	6,355	232	1,365	637	4,581	837	194	14,371
	- net		73	16	3,285	110	407	223	865	259	36	5,274
Undeveloped ^c	- gross		1,208	1,754	7,378	9,702	28,183	33,833	378,899	6,988	20,050	487,995
	- net		755	648	5,365	5,564	11,593	21,799	74,009	2,302	10,755	132,790
2013												
Developed	- gross		128	39	6,340	223	1,634	621	4,380	1,982	162	15,509
	- net		71	16	3,334	109	453	221	831	355	35	5,425
Undeveloped ^c	- gross		1,118	1,196	6,669	9,710	29,100	26,538	257,896	20,141	16,021	368,389
	- net		672	403	4,585	7,638	12,943	17,142	50,285	7,258	11,254	112,180
2012												
Developed	- gross		168	39	6,516	228	1,702	605	1,597	2,023	162	13,040
	- net		85	16	3,463	111	461	220	712	400	35	5,503
Undeveloped ^c	- gross		1,273	180	7,469	6,074	27,755	30,684	26,291	26,505	17,854	144,085
	- net		730	77	4,935	4,154	14,032	18,419	11,061	9,339	13,098	75,845

^a Because of rounding, some totals may not exactly agree with the sum of their component parts.

^b Based on information received from Rosneft as at 31 December 2016.

^c Undeveloped acreage includes leases and concessions.

Exploration and development wells^a

		Europe		North America		South America	Africa	Asia	Australasia	Total ^b
		UK	Rest of Europe	US	Rest of North America			Russia	Rest of Asia	
2016										
Exploratory	Productive	0.3	0.4	0.5	–	0.6	2.1	3.4	1.6	8.9
	Dry	1.0	0.3	4.7	–	–	1.5	–	0.3	7.8
Development	Productive	3.4	1.4	145.6	–	99.8	20.2	88.5	55.2	414.6
	Dry	0.8	–	–	–	0.6	2.0	–	1.0	4.4
2015										
Exploratory	Productive	–	–	4.0	–	1.1	2.6	4.5	–	12.2
	Dry	–	–	–	–	0.4	1.0	–	0.2	1.6
Development	Productive	1.6	0.4	235.6	–	143.1	20.7	91.4	51.2	544.7
	Dry	–	–	–	–	2.3	1.3	–	–	3.5
2014										
Exploratory	Productive	2.9	–	5.3	–	3.7	0.7	5.3	0.6	18.5
	Dry	0.5	–	7.9	–	1.4	1.6	–	1.4	13.0
Development	Productive	3.1	1.8	294.1	1.5	100.5	13.8	76.2	46.3	537.3
	Dry	–	0.8	–	0.1	3.9	1.0	–	0.4	6.6
2013										
Exploratory	Productive	1.0	–	12.7	–	4.5	1.5	4.0	3.5	27.2
	Dry	–	–	1.1	–	1.4	0.6	–	0.9	4.5
Development	Productive	1.0	1.2	285.7	–	94.6	12.6	395.0	58.0	848.3
	Dry	–	0.2	0.4	–	2.7	0.2	–	0.7	4.6
2012										
Exploratory	Productive	–	0.3	17.1	–	5.8	2.3	14.7	–	40.2
	Dry	0.2	–	0.6	–	1.0	0.5	5.0	–	7.3
Development	Productive	1.6	–	317.8	–	78.9	17.7	552.5	43.1	1,011.6
	Dry	–	–	–	–	–	1.0	–	9.5	10.5

^a Number of net productive and dry exploratory and development oil and natural gas wells completed or abandoned in the years indicated by the group and its equity-accounted entities. Productive wells include wells in which hydrocarbons were encountered and the drilling or completion of which, in the case of exploratory wells, has been suspended pending further drilling or evaluation. A dry well is one found to be incapable of producing hydrocarbons in sufficient quantities to justify completion.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

Number of productive wells at 31 December 2016

		Europe		North America		South America	Africa	Asia	Australasia	Total ^b
		UK	Rest of Europe	US	Rest of North America			Russia ^a	Rest of Asia	
Oil wells ^c	Gross	126	47	2,472	150	4,994	678	45,585	2,002	56,066
	Net	80	14	849	33	2,736	462	9,003	425	13,604
Gas wells ^d	Gross	55	1	23,608	302	902	160	788	42	25,924
	Net	23	–	10,064	149	343	67	156	11	10,827

^a Based on information received from Rosneft as at 31 December 2016.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

^c Includes approximately 8,367 gross (1,632 net) multiple completion wells (more than one formation producing into the same well bore).

^d Includes approximately 2,825 gross (1,437 net) multiple completion wells. If one of the multiple completions in a well is an oil completion, the well is classified as an oil well.

Drilling and production activities in progress at 31 December 2016^a

		Europe		North America		South America	Africa	Asia	Australasia	Total ^b
		UK	Rest of Europe	US	Rest of North America			Russia	Rest of Asia	
Exploratory	Gross	1.0	0.1	7.0	1.0	2.0	4.0	–	2.0	17.1
	Net	0.9	–	4.1	0.4	1.6	2.5	–	1.3	10.8
Development	Gross	7.0	1.0	266.0	14.0	22.0	39.0	–	41.0	395.0
	Net	2.8	0.3	113.9	7.0	14.3	19.1	–	13.5	171.7

^a Includes suspended development and long-term suspended exploratory wells.

^b Because of rounding, some totals may not exactly agree with the sum of their component parts.

Key indicators^a

	2012	2013	2014	2015	2016
Result and oil price					
Replacement cost profit (loss) before interest and tax (\$ million) ^b	22,491	16,657	8,934	(937)	574
Underlying replacement cost profit before interest and tax (\$ million) ^b	19,436	18,265	15,201	1,193	(542)
BP average liquids realizations (\$/bb) ^{c,d,e}	102.10	99.24	88.88	47.32	38.27
Finding and development costs (\$ per barrel of oil equivalent (\$/boe), five-year rolling average) ^{f,g,h,i,j}	21.59	25.62	39.81	54.36	57.60
Finding costs (\$/boe, five-year rolling average) ^{f,h,i}	7.63	9.29	12.85	17.87	16.61
Production costs (\$/boe) ^{e,k,l}	12.50	13.16	12.75	10.46	8.46
Cost of supply (\$/boe) ^{e,m}	28.00	32.10	34.16	29.71	26.06
Net income per barrel of oil equivalent (\$/boe)					
BP subsidiaries and equity-accounted entities excluding TNK-BP and Rosneft (\$/boe) ^{e,n}	15.70	14.55	11.30	1.52	(0.06)
Reserves replacement					
BP subsidiaries ^o (%)	(2)	105	29	28	101
BP subsidiaries and equity-accounted entities (%) ^{o,p,q}	77	129	63	61	109

^a Except where indicated, all the data in this table relates to BP subsidiaries only.

^b Includes equity-accounted entities in the Upstream segment.

^c Crude oil, condensate, bitumen and NGLs.

^d Realizations are based on sales of consolidated subsidiaries only, which excludes equity-accounted entities.

^e Production volume recognition methodology for our Technical Service Contract arrangement in Iraq has been simplified in fourth quarter 2016 to exclude the impact of oil price movements on lifting imbalances. A minor adjustment has been made to comparative periods back to 2014. There is no impact on the financial results.

^f Reserves calculated on an SEC basis.

^g Finding costs are described in footnote i. Development costs as disclosed in the exploration and production activities on pages 32-41, include expenditure on construction, installation or completion of infrastructure facilities such as platforms, pipelines and the drilling of development wells, including service and unsuccessful development wells.

^h Based on additions to reserves including revisions of previous estimates, improved recovery, discoveries and extensions.

ⁱ Finding costs are exploration and appraisal drilling expenditures, which are capitalized within intangible assets, and geological and geophysical exploration costs, which are charged to income as incurred as disclosed in the exploration and production activities tables on pages 32-41.

^j Excludes impact of Abu Dhabi onshore oil concession renewal. Including Abu Dhabi concession renewal costs and reserves (revision of previous estimates), the Finding and Development costs for 2016 is \$44.17.

^k Production costs are costs incurred to operate and maintain wells and related equipment and facilities. Amounts do not include ad valorem and severance taxes.

^l Based on production volumes.

^m Cost of supply comprises exploration expenditure, production costs and depreciation, depletion and amortization as disclosed in the exploration and production activities tables on pages 32-41.

ⁿ Underlying replacement cost profit derived from upstream activities, after interest and tax, divided by the number of barrels of oil equivalent produced (including equity-accounted entities but excluding TNK-BP and Rosneft).

^o Includes impact of Abu Dhabi onshore oil concession renewal. Excluding impact of the renewal, the total for 2016 would have been 70%.

^p For 2013, this includes BP's share of TNK-BP's production and reserves additions from 1 January 2013 to 20 March 2013, and BP's share of Rosneft production and reserves additions from 21 March 2013 to 31 December 2013.

^q Includes reserves replacement in TNK-BP, which from 2011 included the effect of moving from life of licence measurement to life of field measurement, reflecting TNK-BP's track record of successful licence renewal.

Financial statistics

	\$ million				
	2012	2013	2014	2015	2016
Replacement cost profit (loss) before interest and tax					
US	6,918	3,625	4,325	(2,283)	(1,522)
Non-US	15,573	13,032	4,609	1,346	2,096
	22,491	16,657	8,934	(937)	574
Underlying replacement cost profit (loss) before interest and tax					
US	3,854	3,836	4,338	(1,615)	(1,270)
Non-US	15,582	14,429	10,863	2,808	728
	19,436	18,265	15,201	1,193	(542)
Operating capital employed					
US	38,437	41,320	40,971	39,032	38,315
Non-US	70,387	70,567	66,553	68,165	74,058
	108,824	111,887	107,524	107,197	112,373
Sales and other operating revenues ^a	72,225	70,374	65,424	43,235	33,188
Organic capital expenditure on an accruals basis*					
US	5,397	6,410	5,931	4,518	2,989
Non-US	12,048	12,706	13,063	11,789	13,059
	17,445	19,116	18,994	16,307	16,048
Employee numbers at year end	24,200	24,700	24,400	21,700	18,700
BP average realizations ^{a,b}					
BP average liquids* realizations (\$/bbl) ^c	102.10	99.24	88.88	47.32	38.27
BP average natural gas realizations (\$/mcf)	4.75	5.35	5.70	3.80	2.84
Marker prices					
Brent oil (\$/bbl)	111.67	108.66	98.95	52.39	43.73
West Texas Intermediate oil (\$/bbl)	94.13	97.99	93.28	48.71	43.34
Western Canadian Select oil (\$/bbl)	72.32	73.37	73.83	36.83	30.78
Alaska North Slope oil (\$/bbl)	111.08	107.67	97.52	52.44	43.67
Mars oil (\$/bbl)	106.79	102.23	92.93	48.19	40.14
Henry Hub gas price (\$ per million British thermal units) ^d	2.79	3.65	4.43	2.67	2.46

^a Includes sales to other segments.

^b Based on sales of consolidated subsidiaries only – this excludes equity-accounted entities.

^c Production volume recognition methodology for our Technical Service Contract arrangement in Iraq has been simplified in fourth quarter 2016 to exclude the impact of oil price movements on lifting imbalances. The comparative data for prior periods back to first quarter 2014 has been restated. There is no impact on the financial results.

^d Henry Hub First of Month Index.

Key indicators

	2012	2013	2014	2015	2016
Result and refining margin					
Replacement cost profit before interest and tax (\$ million)	2,864	2,919	3,738	7,111	5,162
Underlying replacement cost profit before interest and tax (\$ million)	6,463	3,632	4,441	7,545	5,634
Refining marker margin* (\$/bbl)	18.2	15.4	14.4	17.0	11.8
Refining availability* (%)	94.8	95.3	94.9	94.7	95.3
Petrochemicals production (thousand tonnes)	14,727	13,943	14,014	14,760	14,227

Refining marker margin* by region

	\$ per barrel				
	2012	2013	2014	2015	2016
US North West	18.0	15.2	16.6	24.0	16.9
US South West	17.4	n/a	n/a	n/a	n/a
US Gulf Coast	16.1	n/a	n/a	n/a	n/a
US Midwest	27.8	21.7	17.4	19.0	13.2
Northwest Europe	16.1	12.9	12.5	14.5	10.0
Mediterranean	12.7	10.5	10.6	12.7	9.0
Australia	14.8	13.4	13.5	15.4	10.9
BP average RMM	18.2	15.4	14.4	17.0	11.8

Employee numbers at year end^a

	2012	2013	2014	2015	2016
Non-service station staff	37,100	33,900	33,600	29,200	25,600
Service station staff ^b	14,700	14,100	14,400	15,600	16,200
	51,800	48,000	48,000	44,800	41,800

^a Reported to the nearest 100.

^b Service station staff are those employed directly by BP at BP-owned retail sites. It excludes staff at BP-branded sites operated by dealers, jobbers and franchisees.

Financial statistics

	\$ million				
	2012	2013	2014	2015	2016
Replacement cost profit (loss)* before interest and tax					
US	(242)	758	2,259	2,615	484
Non-US	3,106	2,161	1,479	4,496	4,678
	2,864	2,919	3,738	7,111	5,162
Underlying replacement cost profit (loss)* before interest and tax					
US	3,045	1,123	1,684	2,599	853
Non-US	3,418	2,509	2,757	4,946	4,781
	6,463	3,632	4,441	7,545	5,634
Replacement cost profit (loss)* before interest and tax ^{ab}					
Fuels	1,403	1,518	2,830	5,858	3,337
Lubricants	1,276	1,274	1,407	1,241	1,439
Petrochemicals	185	127	(499)	12	386
	2,864	2,919	3,738	7,111	5,162
Non-operating items* and fair value accounting effects* ^c					
Fuels	(3,609)	(712)	(389)	(137)	(390)
Lubricants	(9)	2	136	(143)	(84)
Petrochemicals	19	(3)	(450)	(154)	2
	(3,599)	(713)	(703)	(434)	(472)
Underlying replacement cost profit* (loss) before interest and tax ^{ab}					
Fuels	5,012	2,230	3,219	5,995	3,727
Lubricants	1,285	1,272	1,271	1,384	1,523
Petrochemicals	166	130	(49)	166	384
	6,463	3,632	4,441	7,545	5,634
Operating capital employed					
US	24,835	23,835	19,079	17,545	17,310
Non-US	25,488	25,680	19,799	17,390	16,597
	50,323	49,515	38,878	34,935	33,907
Sales and other operating revenues ^d	346,391	351,195	323,486	200,569	167,683
Property, plant and equipment (net book value)					
US	14,603	16,467	16,033	15,878	15,165
Non-US	15,320	15,131	13,647	12,056	12,388
	29,923	31,598	29,680	27,934	27,553
Organic capital expenditure on an accruals basis*					
US	3,467	2,535	942	702	784
Non-US	1,648	1,899	2,053	1,399	1,357
	5,115	4,434	2,995	2,101	2,141

^a Segment-level overhead expenses are included in the fuels business result.

^b BP's share of income from petrochemicals at our Gelsenkirchen and Mülheim sites in Germany is reported in the fuels business.

^c For Downstream, fair value accounting effects arise solely in the fuels business.

^d Includes sales to other segments.

Refinery throughputs and utilization

Refinery throughputs^a

	thousand barrels per day				
	2012	2013	2014	2015	2016
US	1,310	726	642	657	646
Europe	751	766	782	794	803
Rest of world	293	299	297	254	236
	2,354	1,791	1,721	1,705	1,685
Crude distillation capacity at 31 December ^b	2,681	1,955	1,957	1,853	1,880
Refinery capacity utilization ^c	88%	86%	88%	91%	91%

^a Refinery throughputs reflect crude oil and other feedstock volumes.

^b Crude distillation capacity is gross rated capacity, which is defined as the highest average sustained unit rate for a consecutive 30-day period.

^c Refinery utilization is annual throughput (thousands of barrels per day) divided by the average crude distillation capacity, expressed as a percentage.

Crude oil input

					%
	2012	2013	2014	2015	2016
Low sulphur crude ^a	46	48	45	43	39
High sulphur crude	54	52	55	57	61

^a Low sulphur crude is a crude which has sulphur content of less than 0.5%.

Refinery yield^a

	thousand barrels per day				
	2012	2013	2014	2015	2016
Aviation fuels	316	236	211	223	228
Gasolines	880	616	578	595	590
Middle distillates	700	598	582	582	544
Fuel oil	86	71	91	74	83
Other products ^b	420	274	282	256	275
	2,402	1,795	1,744	1,730	1,720

^a Refinery yields exceed throughputs because of volumetric expansion.

^b Other products include lubricants, petrochemicals, bitumen, petroleum coke and LPG.

Refineries

Refinery capacities

		thousand barrels per day																	
		Crude distillation capacities ^a										Major upgrading plant capacities ^b							
		Group interest % ^c	Total	BP share	Vacuum distillation	Fluid catalytic cracking	Hydro-cracking	Catalytic reforming	Alkylation and poly-merization	Hydro-treating gasoline and naphtha	Hydro-treating jet, distillates and heavier	Vis-breaking	Coker	Aromatics and iso-merization	Asphalt	Hydrogen ^d	Sulphur ^e	Other ^f	Nelson Complexity Index ^g
Wholly and partly owned refineries at 31 December 2016																			
US																			
Washington	Cherry Point	100.0	236	236	112	–	65	65	–	97	75	–	58	24	–	180	254	–	10
Indiana	Whiting	100.0	430	430	264	175	–	65	31	130	371	–	102	29	30	30	1,700	–	12
Ohio	Toledo	50.0	160	80	36	28	16	21	6	20	37	–	18	–	5	–	176	–	11
			826	746	412	203	81	151	37	247	483	–	178	53	35	210	2,130	–	11
Europe																			
Germany ^h	Bayernoil ⁱ	10.0	218	22	9	5	4	4	–	11	9	2	–	–	1	8	33	–	9
	Gelsenkirchen	100.0	265	265	155	30	58	32	–	70	103	19	32	19	16	212	696	–	10
	Lingen	100.0	95	95	45	–	30	30	–	31	45	–	24	19	–	128	147	–	14
Netherlands	Rotterdam	100.0	377	377	82	65	–	32	8	73	279	34	–	–	–	20	231	3	6
Spain	Castellón	100.0	110	110	47	30	–	17	3	57	87	–	22	19	–	48	65	–	10
			1,065	869	338	130	92	115	11	242	523	55	78	57	17	416	1,172	3	9
Rest of world																			
Australia	Kwinana	100.0	149	149	22	35	–	25	7	44	53	–	–	21	2	–	70	–	6
New Zealand	Whangarei ⁱ	21.2	125	26	11	–	7	5	–	7	9	–	–	–	–	4	32	–	6
South Africa	Durban ⁱ	50.0	180	90	38	19	–	17	1	25	44	13	–	8	–	1	130	3	9
			454	265	71	54	7	47	8	76	106	13	–	29	2	5	232	3	7
			2,345	1,880	821	387	180	313	56	565	1,112	68	256	139	54	631	3,534	6	9

^a Crude distillation capacity is gross rated capacity, which is defined as the highest average sustained unit rate for a consecutive 30-day period.

^b These are shown as BP share of capacities; BP has varying interests.

^c BP share of equity, which is not necessarily the same as BP share of processing entitlements.

^d Reported as standard cubic feet per day.

^e Reported as tonnes per day.

^f Other consists of ethyl tertiary butyl ether, methyl tertiary butyl ether and lubricants units.

^g Nelson Complexity Index is calculated as defined by the Oil and Gas Journal survey 2013. In general, the higher a refinery's Nelson Complexity Index, the greater that refinery's ability to make higher-value products from a given feedstock.

^h On 31 December 2016 we completed the dissolution of our German refining joint operation with Rosneft. The capacities here reflect BP's share of capacities after the dissolution.

ⁱ Indicates refineries not operated by BP.

Regional refining distillation capacity

		thousand barrels per day				
		2012	2013	2014	2015	2016
US Gulf Coast ^a		475	–	–	–	–
US Midwest		493	508	510	510	510
US West Coast ^b		500	234	234	234	236
Total US		1,468	742	744	744	746
Europe		847	847	847	847	869
Rest of world ^c		366	366	366	262	265
Total		2,681	1,955	1,957	1,853	1,880

^a Texas City refinery was divested in 2013

^b Carson refinery was divested in 2013.

^c Bulwer refinery ceased refining operations in 2015.

Downstream

Retail sites^{ab}

	at 31 December				
	2012	2013	2014	2015	2016
US	10,100	7,700	7,100	7,000	7,100
Europe	8,300	8,000	8,000	8,100	8,100
Rest of world	3,100	2,900	2,900	2,900	2,800
	21,500	18,600	18,000	18,000	18,000

^a Reported to the nearest 100.

^b The number of retail sites includes sites not operated by BP but instead operated by dealers, jobbers, franchisees or brand licensees under a BP brand. These may move to or from the BP brand as their fuel supply or brand licence agreements expire and are renegotiated in the normal course of business. Retail sites are primarily branded BP, ARCO and Aral and includes our interest in equity-accounted entities.

Oil sales volumes^a

	thousand barrels per day				
	2012	2013	2014	2015	2016
Refined product marketing sales volumes by region					
US					
Aviation fuels	210	231	214	207	204
Gasolines	914	786	726	732	738
Middle distillates	204	176	145	135	132
Fuel oil	36	35	28	6	–
Other products ^b	32	54	53	78	60
	1,396	1,282	1,166	1,158	1,134
Europe					
Aviation fuels	253	254	218	257	249
Gasolines	225	222	212	215	209
Middle distillates	586	599	577	586	588
Fuel oil	70	80	106	77	72
Other products ^b	96	82	64	63	61
	1,230	1,237	1,177	1,198	1,179
Rest of world					
Aviation fuels	95	104	93	99	102
Gasolines	106	98	96	90	99
Middle distillates	156	170	175	174	183
Fuel oil	199	164	140	76	97
Other products ^b	31	29	25	40	31
	587	565	529	479	512
Total marketing sales volumes by product					
Aviation fuels	558	589	525	563	555
Gasolines	1,245	1,105	1,033	1,037	1,046
Middle distillates	946	945	896	895	903
Fuel oil	305	280	274	159	169
Other products ^b	159	165	144	181	152
Total marketing sales ^c	3,213	3,084	2,872	2,835	2,825
Trading/supply sales ^d	2,444	2,485	2,448	2,770	2,775
Total refined product sales	5,657	5,569	5,320	5,605	5,600
Crude oil sales ^e	1,518	2,142	2,360	2,098	2,169
Total oil sales	7,175	7,711	7,680	7,703	7,769

^a Excludes sales to other BP businesses and sales of petrochemicals products.

^b Other products include lubricants, petroleum coke, bitumen and LPG.

^c Marketing sales include sales to service stations, end-consumers, bulk buyers and jobbers (i.e. third parties who own networks of a number of service stations) and small resellers.

^d Trading/supply sales are sales to large unbranded resellers and other oil companies.

^e Crude oil sales relate to transactions executed by our integrated supply and trading function, primarily for optimizing crude oil supplies to our refineries and in other trading. 71,000 barrels per day relate to revenues reported by the Upstream segment.

Sales and other operating revenues of refined product

	\$ million				
	2012	2013	2014	2015	2016
US	108,196	90,917	79,795	53,935	48,037
Europe	107,325	108,585	94,806	64,253	51,635
Rest of world	59,145	58,513	52,481	30,737	26,747
	274,666	258,015	227,082	148,925	126,419

Downstream

Petrochemicals production capacity^a

			BP share of capacity thousand tonnes per annum ^b				
Geographical area	Site	Group interest % ^c	Product				
			PTA	PX	Acetic acid	Olefins and derivatives	Others
US							
	Cooper River	100	1,400	–	–	–	–
	Texas City	100	–	900	600 ^d	–	100
			1,400	900	600	–	100
Europe							
UK	Hull ^e	100	–	–	500	–	200
Belgium	Geel	100	1,300	700	–	–	–
Germany	Gelsenkirchen ^f	100	–	–	–	3,300	–
	Mülheim ^f	100	–	–	–	–	300
			1,300	700	500	3,300	500
Rest of world							
Trinidad & Tobago	Point Lisas	36.9	–	–	–	–	700
China	Caojing	50	–	–	–	3,500	–
	Chongqing	51	–	–	200	–	100
	Nanjing	50	–	–	300	–	–
	Zhuhai ^g	85	2,500	–	–	–	–
Indonesia	Merak	100	500	–	–	–	–
South Korea	Ulsan	34-51	–	–	300 ^h	–	100 ^h
Malaysia	Kertih	70	–	–	400	–	–
Taiwan	Mai Liao	50	–	–	200	–	–
	Taichung	61.4	500	–	–	–	–
			3,500	–	1,400	3,500	900
			6,200	1,600	2,500	6,800	1,500
Total BP share of capacity at 31 December 2016							18,600

Petrochemicals production capacities summary

		BP share of capacity, thousand tonnes per annum					
By geographical area		PTA	PX	Acetic acid	Olefins and derivatives	Others	Total
US		1,400	900	600	–	100	3,000
Europe		1,300	700	500	3,300	500	6,300
Rest of world		3,500	–	1,400	3,500	900	9,300
Total BP share of capacity at 31 December 2016		6,200	1,600	2,500	6,800	1,500	18,600

^a Petrochemicals production capacity is the proven maximum sustainable daily rate (MSDR) multiplied by the number of days in the respective period, where MSDR is the highest average daily rate ever achieved over a sustained period.

^b Capacities are shown to the nearest hundred thousand tonnes per annum.

^c Includes BP share of equity-accounted entities, as indicated.

^d Group interest is quoted at 100%, reflecting the capacity entitlement, which is marketed by BP.

^e The site has a capacity under 100,000 tonnes per annum for a speciality product (e.g. naphthalene dicarboxylate and ethylidene diacetate).

^f Due to the integrated nature of these plants with our Gelsenkirchen refinery, the income and expenditure of these plants is managed and reported through the fuels business. On 31 December 2016 we completed the dissolution of our German refining joint operation with Rosneft. The capacities here reflect BP's share of capacities after the dissolution.

^g BP Zhuhai Chemical Company Ltd is a subsidiary of BP, the capacity of which is shown above at 100%.

^h Group interest varies by product.

Petrochemicals production^a

		thousand tonnes				
By geographical area		2012	2013	2014	2015	2016
US		4,047	4,264	3,844	3,666	2,564
Europe		3,927	3,779	3,851	3,527	3,729
Rest of world		6,753	5,900	6,319	7,567	7,934
		14,727	13,943	14,014	14,760	14,227

^a Comprises actual production in respect of the products listed in the capacity table above.

Downstream

Operational and financial information

	\$ million				
	2012	2013 ^a	2014	2015	2016
Financial statistics					
Profit before interest and tax ^{b,c}	–	2,053	2,076	1,314	643
Inventory holding (gains) losses*	–	100	24	(4)	(53)
Replacement cost profit* before interest and tax	–	2,153	2,100	1,310	590
Net charge (credit) for non-operating items	–	45	(225)	–	(23)
Underlying replacement cost profit* before interest and tax	–	2,198	1,875	1,310	567

^a From 21 March 2013.

^b BP's share of Rosneft's earnings after finance costs, taxation and non-controlling interests is included in the BP group income statement within profit before interest and taxation

^c 2016 includes \$3 million of foreign exchange losses arising on the dividend received (2015 \$16 million, 2014 \$25 million, 2013 \$5 million). This amount is not reflected in the following table.

The Rosneft segment result includes equity-accounted earnings from Rosneft, representing BP's 19.75% share in Rosneft. BP's share of the components of Rosneft's net income is shown in the table below.

	\$ million				
	2012	2013	2014	2015	2016
Income statement (BP share)^d					
Profit before interest and tax	–	2,786	3,825	2,420	1,401
Finance costs	–	(264)	(1,033)	(730)	(345)
Taxation	–	(422)	(677)	(354)	(355)
Non-controlling interests	–	(42)	(14)	(6)	(54)
Net income	–	2,058	2,101	1,330	647
Inventory holding (gains) losses, net of tax	–	100	24	(4)	(53)
Net income on a replacement cost basis	–	2,158	2,125	1,326	594
Net charge (credit) for non-operating items, net of tax	–	45	(225)	–	(23)
Net income on an underlying RC basis	–	2,203	1,900	1,326	571

Balance sheet

Investment in associates	–	13,681	7,312	5,797	8,243
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Cash flow

Dividends received	–	456	693	271	332
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	2012	2013	2014	2015	2016
Production (net of royalties)(BP Share)^e					
Liquids (thousand barrels per day) ^f	–	650	821	813	840
Natural gas (million cubic feet per day)	–	617	1,084	1,195	1,279
Total hydrocarbons (thousand barrels of oil equivalent per day (mboe/d)) ^g	–	756	1,008	1,019	1,060

Average oil marker prices

	\$ per barrel				
	2012	2013	2014	2015	2016
Urals (north-west Europe – CIF)	110.19	107.38	97.23	50.97	41.68

^d From 1 October 2014, Rosneft adopted hedge accounting in relation to a portion of highly probable future export revenue denominated in US dollars over a five-year period. Foreign exchange gains and losses arising on the retranslation of borrowings denominated in currencies other than the Russian rouble and designated as hedging instruments are recognized initially in other comprehensive income, and are reclassified to the income statement as the hedged revenue is recognized.

^e 2013 reflects production for the period 21 March to 31 December 2013, averaged over the full year.

^f Liquids comprise crude oil, condensate and natural gas liquids.

^g Natural gas is converted to oil equivalent at 5.8 billion cubic feet = 1 million barrels.

Financial statistics

	\$ million				
	2012	2013	2014	2015	2016
Replacement cost profit (loss) before interest and tax					
US ^a	(6,636)	(1,679)	(1,735)	(12,582)	(7,100)
Non-US	(1,153)	(1,070)	(1,056)	(895)	(1,057)
	(7,789)	(2,749)	(2,791)	(13,477)	(8,157)
Underlying replacement cost profit (loss) before interest and tax					
US ^b	(859)	(800)	(594)	(439)	(276)
Non-US	(1,137)	(1,098)	(746)	(782)	(962)
	(1,996)	(1,898)	(1,340)	(1,221)	(1,238)
Operating capital employed					
US ^a	(13,509)	(9,923)	(10,320)	(20,453)	(20,922)
Non-US	14,785	19,818	23,023	21,055	13,582
	1,276	9,895	12,703	602	(7,340)
Sales and other operating revenues ^b	1,985	1,805	1,989	2,048	1,667
Organic capital expenditure on an accruals basis*					
US	636	231	82	70	45
Non-US	754	819	821	270	206
	1,390	1,050	903	340	251
Employee numbers at year end ^{c d e}	10,400	11,200	12,100	13,300	14,000

^a All amounts relating to the Gulf of Mexico oil spill are included in Other businesses and corporate - US. For breakdown see table below.

^b Includes sales to other segments.

^c 2016 includes 4,600 (2015 4,800, 2014 5,300, 2013 4,300 and 2012 3,500) agricultural, operational and seasonal workers in Brazil.

^d Includes employees of the Gulf Coast Restoration Organization.

^e Around 800 centralized function employees were reallocated from Upstream and Downstream to Other businesses and corporate during 2016 and around 2,000 employees from the global business services organization were reallocated from Downstream to Other businesses and corporate during 2015.

Breakdown of Other businesses and corporate - US	2012	2013	2014	2015	2016
Replacement cost profit (loss) before interest and tax					
Gulf of Mexico oil spill	(4,995)	(430)	(781)	(11,709)	(6,640)
Other	(1,641)	(1,249)	(954)	(873)	(460)
	(6,636)	(1,679)	(1,735)	(12,582)	(7,100)
Operating capital employed					
Gulf of Mexico oil spill	(9,394)	(8,464)	(7,986)	(18,797)	(18,826)
Other	(4,115)	(1,459)	(2,334)	(1,656)	(2,096)
	(13,509)	(9,923)	(10,320)	(20,453)	(20,922)

Biofuels and wind

	2012	2013	2014	2015	2016
Biofuels					
Total net ethanol-equivalent production (million litres per annum) ^a	404	521	653	795	733
Crush capacity (million tonnes per annum)	7.2	7.4	10.0	10.0	10.0

^a Ethanol-equivalent production includes ethanol and sugar.

	megawatts				
	2012	2013	2014	2015	2016
Wind capacity ^b					
US	1,558	1,558	1,556	1,556	1,452
Non-US	32	32	32	32	22
	1,590	1,590	1,588	1,588	1,474

^b Net wind generation capacity is the sum of the rated capacities of the assets/turbines that have entered into commercial operation, including BP's share of equity-accounted entities. The equivalent capacities on a gross-joint-arrangement basis (which includes 100% of the capacity of equity-accounted entities where has partial ownership) were 2,302 megawatts (MW) in 2016, 2,617MW in 2015, 2,617MW in 2014, 2013 and 2012. This includes 22MW (32MW 2015-2012) of capacity in Netherlands which is managed by our Downstream segment.

Other businesses and corporate

Operational and financial information

	\$ million	
	2012	2013
Financial statistics		
Profit before interest and tax ^a	3,370	12,500
Inventory holdings gains and losses	3	–
Replacement cost profit before interest and tax	3,373	12,500
Net (favourable) unfavourable impact of non-operating items	(246)	(12,500)
Underlying replacement cost profit before interest and tax	3,127	–

^a The TNK-BP segment includes equity-accounted earnings from associates, in which all amounts shown relate to BP's 50% share in TNK-BP, as follows:

	2012	2013
Income statement (BP share)		
Profit before interest and tax	4,405	–
Finance costs	(84)	–
Taxation	(979)	–
Non-controlling interest	(356)	–
Net income ^b	2,986	–
Inventory holding gains, net of tax	3	–
Net income on a replacement cost basis	2,989	–
Net charge (credit) for non-operating items, net of tax ^c	138	–
Net income on an underlying RC basis	3,127	–
Balance sheet		
Investment in associates ^d	–	–
Cash flow		
Dividends received ^e	1,399	–
	2012	2013
Production (net of royalties)(BP share)^f		
Crude oil (thousand barrels per day)	876	187
Natural gas (million cubic feet per day)	784	184
Total hydrocarbons (thousand barrels of oil equivalent per day (mboe/d)) ^g	1,012	218
Average oil marker prices		
	\$ per barrel	
	2012	2013
Urals (north-west Europe – CIF)	110.19	107.38

^b Until 22 October 2012, TNK-BP was an associate accounted for using the equity method and therefore BP's share of TNK-BP's earnings after interest and tax was included in the group income statement within BP's profit before interest and tax.

^c Disclosure of non-operating items for TNK-BP began in the first quarter of 2012.

^d On 22 October 2012, BP announced that it had signed heads of terms to sell its 50% share in TNK-BP to Rosneft. Consequently, BP ceased accounting for its interest in TNK-BP using the equity method and the investment was classified as an asset held for sale from that date.

^e 2012 includes the dividend of \$709 million received after the date equity accounting ceased.

^f BP continued to report its share of TNK-BP's production and reserves following the agreement to sell its 50% share of Rosneft until the sale completed on 21 March 2013. Estimated hydrocarbon production for the full year 2013 represents BP's share of TNK-BP's estimated production from 1 January to 20 March, averaged over the full year.

^g Natural gas is converted to oil equivalent at 5.8 billion cubic feet = 1 million barrels.

Abbreviations and glossary

Abbreviations

ADS

American depositary share. 1 ADS = 6 ordinary shares.

Barrel (bbl)

159 litres, 42 US gallons.

b/d

Barrels per day.

boe/d

Barrels of oil equivalent per day.

GAAP

Generally accepted accounting practice.

Gas

Natural gas.

IFRS

International Financial Reporting Standards.

LNG

Liquefied natural gas.

LPG

Liquefied petroleum gas.

mb/d

Thousand barrels per day.

mboe/d

Thousand barrels of oil equivalent per day.

MW

Megawatt

NGLs

Natural gas liquids.

PTA

Purified terephthalic acid.

RC

Replacement cost.

SEC

The United States Securities and Exchange Commission.

Definitions

Unless the context indicates otherwise, the definitions for the following glossary terms are given below.

Associate

An entity over which the group has significant influence and that is neither a subsidiary nor a joint arrangement of the group. Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies.

Brent

A trading classification for North Sea crude oil that serves as a major benchmark price for purchases of oil worldwide.

Capital expenditure on an accruals basis

Non-GAAP measure. It comprises additions to property, plant and equipment, intangible assets and investments in joint ventures and associates, and reflects consideration payable in business combinations. It does not include additions arising from asset exchanges and certain other non-cash items. The nearest equivalent measure on an IFRS basis for the group is Additions to non-current assets. BP believes that Capital expenditure on an accruals basis provides useful information for investors as it is the measure used by management to plan and prioritize the group's investment of its resources and allows investors to understand how the group balances funds between shareholder distributions and investment for the future.

Consolidation adjustment – UPII

Unrealized profit in inventory arising on inter-segment transactions.

Effective tax rate (ETR) on replacement cost (RC) profit or loss

Non-GAAP measure. The ETR on RC profit or loss is calculated by dividing taxation on a RC basis by RC profit or loss before tax. Information on RC profit or loss is provided below. BP believes it is helpful to disclose the ETR on RC profit or loss because this measure excludes the impact of price changes on the replacement of inventories and allows for more meaningful comparisons between reporting periods. The nearest equivalent measure on an IFRS basis is the ETR on profit or loss for the period.

Fair value accounting effects

We use derivative instruments to manage the economic exposure relating to inventories above normal operating requirements of crude oil, natural gas and petroleum products. Under IFRS, these inventories are recorded at historical cost. The related derivative instruments, however, are required to be recorded at fair value with gains and losses recognized in the income statement. This is because hedge accounting is either not permitted or not followed, principally due to the impracticability of effectiveness-testing requirements. Therefore, measurement differences in relation to recognition of gains and losses occur. Gains and losses on these inventories are not recognized until the commodity is sold in a subsequent accounting period. Gains and losses on the related derivative commodity contracts are recognized in the income statement, from the time the derivative commodity contract is entered into, on a fair value basis using forward prices consistent with the contract maturity.

BP enters into physical commodity contracts to meet certain business requirements, such as the purchase of crude for a refinery or the sale of BP's gas production. Under IFRS these contracts are treated as derivatives and are required to be fair valued when they are managed as part of a larger portfolio of similar transactions. In addition, derivative instruments are used to manage the price risk associated with certain future natural gas sales. Gains and losses arising are recognized in the income statement from the time the derivative commodity contract is entered into.

IFRS require that inventory held for trading is recorded at its fair value using period-end spot prices, whereas any related derivative commodity instruments are required to be recorded at values based on forward prices consistent with the contract maturity. Depending on market conditions, these forward prices can be either higher or lower than spot prices, resulting in measurement differences.

BP enters into contracts for pipelines and storage capacity, oil and gas processing and liquefied natural gas (LNG) that, under IFRS, are recorded on an accruals basis. These contracts are risk-managed using a variety of derivative instruments that are fair valued under IFRS. This results in measurement differences in relation to recognition of gains and losses.

The way BP manages the economic exposures described above, and measures performance internally, differs from the way these activities are measured under IFRS. BP calculates this difference for consolidated entities by comparing the IFRS result with management's internal measure of performance. Under management's internal measure of performance the inventory and capacity contracts in question are valued based on fair value using relevant forward prices prevailing at the end of the period. The fair values of certain derivative instruments used to risk manage certain LNG and oil and gas contracts and gas sales contracts, are deferred to match with the underlying exposure and the commodity contracts for business requirements are accounted for on an accruals basis. We believe that disclosing management's estimate of this difference provides useful information for investors because it enables investors to see the economic effect of these activities as a whole.

Gearing

See Net debt and net debt ratio definition.

Henry Hub

A distribution hub on the natural gas pipeline system in Erath, Louisiana, that lends its name to the pricing point for natural gas futures contracts traded on the New York Mercantile Exchange and the over the counter swaps traded on Intercontinental Exchange.

Hydrocarbons

Liquids and natural gas. Natural gas is converted to oil equivalent at 5.8 billion cubic feet = 1 million barrels.

Inorganic capital expenditure

A subset of Capital expenditure on an accruals basis and is a non-GAAP measure. Inorganic capital expenditure comprises consideration in business combinations and certain other significant investments made by the group. It is reported on an accruals basis. BP believes that this measure provides useful information as it allows investors to understand how BP's management invests funds in projects which expand the group's activities through acquisition.

Inventory holding gains and losses

The difference between the cost of sales calculated using the replacement cost of inventory and the cost of sales calculated on the first-in first-out (FIFO) method after adjusting for any changes in provisions where the net realizable value of the inventory is lower than its cost. Under the FIFO method, which we use for IFRS reporting, the cost of inventory charged to the income statement is based on its historical cost of purchase or manufacture, rather than its replacement cost. In volatile energy markets, this can have a significant distorting effect on reported income. The amounts disclosed represent the difference between the charge to the income statement for inventory on a FIFO basis (after adjusting for any related movements in net realizable value provisions) and the charge that would have arisen based on the replacement cost of inventory. For this purpose, the replacement cost of inventory is calculated using data from each operation's production and manufacturing system, either on a monthly basis, or separately for each transaction where the system allows this approach. The amounts disclosed are not separately reflected in the financial statements as a gain or loss. No adjustment is made in respect of the cost of inventories held as part of a trading position and certain other temporary inventory positions. See Replacement cost (RC) profit or loss definition below.

Joint arrangement

An arrangement in which two or more parties have joint control.

Joint control

Contractually agreed sharing of control over an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

Abbreviations and glossary

Abbreviations and glossary continued

Joint operation

A joint arrangement where the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement.

Joint venture

A joint arrangement where the parties that have joint control of the arrangement have rights to the net assets of the arrangement.

Liquids

Comprises crude oil, condensate and natural gas liquids. For the Upstream segment, it also includes bitumen.

LNG train

An LNG train is a processing facility used to liquefy and purify natural gas in the formation of LNG.

Net debt and net debt ratio (gearing)

Non-GAAP measures. Net debt is calculated as gross finance debt, as shown in the balance sheet, plus the fair value of associated derivative financial instruments that are used to hedge foreign currency exchange and interest rate risks relating to finance debt, for which hedge accounting is applied, less cash and cash equivalents. The net debt ratio is defined as the ratio of net debt to the total of net debt plus total shareholders' equity. All components of equity are included in the denominator of the calculation. BP believes these measures provide useful information to investors. Net debt enables investors to see the economic effect of gross debt, related hedges and cash and cash equivalents in total. The net debt ratio enables investors to see how significant net debt is relative to equity from shareholders. The derivatives are reported on the balance sheet within the headings 'Derivative financial instruments'.

Net income per barrel

Non-GAAP measure. Net income per barrel is calculated by taking underlying replacement cost profit before interest and tax for the Downstream segment, deducting tax at an assumed 2830% effective tax rate on underlying replacement cost profit and then dividing this notional post tax underlying replacement cost profit by the Downstream segment's total refining capacity. It is a measure that we use to compare our performance vs the competition. By looking at underlying RC profit before interest and tax, we are able to normalize for any one-off NOIs etc that may occur during the year and by using a per barrel of refining capacity measure, we are able to normalize for differing sizes of refining portfolios that each company. This therefore creates greater comparability of the actual earnings performance for each company.

Net generation capacity

The sum of the rated capacities of the assets/turbines that have entered into commercial operation, including BP's share of equity-accounted entities. The gross data is the equivalent capacity on a gross-joint venture basis, which includes 100% of the capacity of equity-accounted entities where BP has partial ownership.

Non-operating items

Charges and credits are included in the financial statements that BP discloses separately because it considers such disclosures to be meaningful and relevant to investors. They are items that management considers not to be part of underlying business operations and are disclosed in order to enable investors better to understand and evaluate the group's reported financial performance. Non-operating items within equity-accounted earnings are reported net of incremental income tax reported by the equity-accounted entity.

Operating capital employed

Non-GAAP measure. Total assets (excluding goodwill) less total liabilities, excluding finance debt and current and deferred taxation.

Operating cash flow

Net cash provided by (used in) operating activities as stated in the group cash flow statement. When used in the context of a segment rather than the group, the terms refer to the segment's share thereof.

Organic capital expenditure

A subset of Capital expenditure on an accruals basis and is a non-GAAP measure. Organic capital expenditure comprises capital expenditure on an accruals basis less inorganic capital expenditure. BP believes that this measure provides useful information as it allows investors to understand how BP's management invests funds in developing and maintaining the group's assets.

Production-sharing agreement (PSA)

An arrangement through which an oil company bears the risks and costs of exploration, development and production. In return, if exploration is successful, the oil company receives entitlement to variable physical volumes of hydrocarbons, representing recovery of the costs incurred and a stipulated share of the production remaining after such cost recovery.

Realizations

Realizations are the result of dividing revenue generated from hydrocarbon sales, excluding revenue generated from purchases made for resale and royalty volumes, by revenue generating hydrocarbon production volumes. Revenue generating hydrocarbon production reflects the BP share of production as adjusted for any production which does not generate revenue. Adjustments may include losses due to shrinkage, amounts consumed during processing, and contractual or regulatory host committed volumes such as royalties. For the Upstream segment, realizations include transfers between businesses.

Refining availability

Represents Solomon Associates' operational availability, which is defined as the percentage of the year that a unit is available for processing after subtracting the annualized time lost due to turnaround activity and all planned mechanical, process and regulatory downtime.

Refining marker margin (RMM)

The average of regional indicator margins weighted for BP's crude refining capacity in each region. Each regional marker margin is based on product yields and a marker crude oil deemed appropriate for the region. The regional indicator margins may not be representative of the margins achieved by BP in any period because of BP's particular refinery configurations and crude and product slate.

Replacement cost (RC) profit or loss

Reflects the replacement cost of inventories sold in the period and is arrived at by excluding inventory holding gains and losses from profit or loss. RC profit or loss is the measure of profit or loss that is required to be disclosed for each operating segment under IFRS. RC profit or loss for the group is a non-GAAP measure. Management believes this measure is useful to illustrate to investors the fact that crude oil and product prices can vary significantly from period to period and that the impact on our reported result under IFRS can be significant. Inventory holding gains and losses vary from period to period due to changes in prices as well as changes in underlying inventory levels. In order for investors to understand the operating performance of the group excluding the impact of price changes on the replacement of inventories, and to make comparisons of operating performance between reporting periods, BP's management believes it is helpful to disclose this measure. The nearest equivalent measure on an IFRS basis is profit or loss attributable to BP shareholders.

RC profit or loss per share

Non-GAAP measure. Basic earnings per ordinary share (EPS) amounts are calculated by dividing the profit for the period attributable to ordinary shareholders by the weighted average number of ordinary shares outstanding during the period. RC profit or loss per share is calculated using the same denominator. The numerator used is RC profit or loss attributable to BP shareholders rather than profit or loss attributable to BP shareholders. BP believes it is helpful to disclose the RC profit or loss per share because this measure excludes the impact of price changes on the replacement of inventories and allows for more meaningful comparisons between reporting periods. The nearest equivalent measure on an IFRS basis is basic earnings per share based on profit or loss for the period attributable to BP shareholders.

Reserves replacement ratio

The extent to which production is replaced by proved reserves additions. This ratio is expressed in oil equivalent terms and includes changes resulting from revisions to previous estimates, improved recovery, and extensions and discoveries.

Return on average capital employed

Non-GAAP measure. Return on average capital employed (ROACE) is underlying replacement cost profit, after adding back non-controlling interest and interest expense net of notional tax at an assumed 35%, divided by average capital employed, excluding cash and cash equivalents and goodwill. BP believes it is helpful to disclose the ROACE because this measure gives an indication of the company's capital efficiency.

Subsidiary

An entity that is controlled by the BP group. Control of an investee exists when an investor is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee.

Underlying production

Production after adjusting for divestments and entitlement impacts in our production-sharing agreements. 2017 underlying production does not include the Abu Dhabi onshore concession renewal.

Underlying RC profit or loss

Non-GAAP measure. RC profit or loss after adjusting for non-operating items and fair value accounting effects. BP believes that underlying RC profit or loss is a useful measure for investors because it is a measure closely tracked by management to evaluate BP's operating performance and to make financial, strategic and operating decisions and because it may help investors to understand and evaluate, in the same manner as management, the underlying trends in BP's operational performance on a comparable basis, year on year, by adjusting for the effects of these non-operating items and fair value accounting effects. The nearest equivalent measure on an IFRS basis for the group is profit or loss for the year attributable to BP shareholders. The nearest equivalent measure on an IFRS basis for segments is RC profit or loss before interest and taxation.

Underlying RC profit or loss per share

Non-GAAP measure. Basic earnings per ordinary share (EPS) amounts are calculated by dividing the profit for the period attributable to ordinary shareholders by the weighted average number of ordinary shares outstanding during the period. Underlying RC profit or loss per share is calculated using the same denominator. The numerator used is underlying RC profit or loss attributable to BP shareholders rather than profit or loss attributable to BP shareholders. BP believes it is helpful to disclose the underlying RC profit or loss per share because this measure may help investors to understand and evaluate, in the same manner as management, the underlying trends in BP's operational performance on a comparable basis, period on period. The nearest equivalent measure on an IFRS basis is basic earnings per share based on profit or loss for the period attributable to BP shareholders.

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