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Mohammad Sanusi Barkindo, OPEC Secretary General.

It gives me great pleasure to introduce this **57th edition** of the **Annual Statistical Bulletin (ASB)**. The ASB is one of OPEC's flagship publications, along with the *World Oil Outlook*. First released back in 1965, this yearly publication has earned its status over the years as a reputable and trustworthy source for energy stakeholders around the world.

Our lives today revolve around data and technology. In fact, nearly everything we do on a daily basis is connected in one way or another to data. At OPEC, the same applies — indeed data goes to the core of what we do.

The data we collect for our oil market analysis and forecasting is of critical importance, and we constantly strive to ensure the highest level of accuracy in all that we do. This enables us to make **educated and informed decisions** based on verifiable facts and figures. We cannot and do not rely on assumptions.

Our dedicated focus on **data accuracy and transparency** has led energy analysts, oil companies and industry decision-makers to trust the ASB for the key data and statistics they require to make important decisions and to better inform their planning and operations.

OPEC's laser focus on the quality and reliability of data and research underpins our objectives of promoting a **sustainable oil market stability for the benefit of producers, consumers and the global economy**.

The success of this year's ASB would not have been possible without the combined efforts of our **Data Services Department** working in close cooperation with our **Member Country** experts.

I commend the entire ASB team for producing yet another stellar edition that meets the highest standards of quality and excellence. I am confident that this year's publication will prove to be highly beneficial to stakeholders across the global industry.

And, finally, our hope is that this product, through the transparency of its data, will also serve as a tool to help us promote a **sustainable market stability** in the years ahead.

A handwritten signature in black ink, which appears to be 'S. Barkindo'.

Mohammad Sanusi Barkindo
Secretary General



The *Annual Statistical Bulletin (ASB)*, one of the flagship publications of the Organization of the Petroleum Exporting Countries (OPEC), provides detailed and comprehensive time series data covering all aspects of the oil industry, ranging from exploration and production to refining and transportation.

The ASB is distinctive in providing comprehensive statistical data on oil and gas activities in each of the 13 OPEC Member Countries: Algeria, Angola, Congo, Equatorial Guinea, Gabon, the Islamic Republic of Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia, the United Arab Emirates and Venezuela. In addition, it provides valuable data for many other countries grouped by geographical region, and covers the world's major economic zones.

The current version of the Annual Statistical Bulletin 2022 (ASB 2022) comprises data up to the end of 2021, with the following highlights:

► After witnessing an historical drop in 2020 after the outbreak of the COVID-19 pandemic, total world **crude oil production** increased in 2021 by 0.52 million barrels/day (m b/d) or 0.8 per cent, as compared to 2020, for an average of 69.64m b/d. OPEC crude oil production rose year-on-year by 0.70m b/d, or 2.7 per cent, while crude production by non-OPEC countries fell slightly by 0.18m b/d, or 0.4 per cent.

► With an average of 96.92m b/d in 2021, world **oil demand** rebounded from the COVID-19 pandemic to grow by 5.74m b/d y-o-y, or by 6.3 per cent. Although oil demand grew year-on-year in every region, the largest gains were recorded for OECD Americas, OECD Europe and China. Oil demand in OPEC Member Countries was bullish in 2021, gaining 5.3 per cent y-o-y. Distillates and gasoline accounted for around 55.2 per cent of 2021 world oil demand with an upward trend. Residual fuel oil requirements were about 6.6 per cent of total oil demand in 2021.

► World **refinery capacity** gained by 0.28m barrels/calendar day (b/cd) to stand at 101.70m b/cd during 2021. The non-OECD region, particularly the Middle East and China, as well as Africa and India recorded refining capacity additions. Refinery capacity in the OECD declined for the third consecutive year in 2021. Globally, refinery throughput increased by 5.1 per cent to reach 81.82m b/d in 2021 amid bullish oil demand.

► OPEC Member Countries **exported** an average of 19.66m b/d of crude oil in 2021, a slight decrease of about 0.04m b/d, or 0.2 per cent, compared to 2020 and remaining below pre-pandemic levels. Following the pattern seen in previous years, the bulk of crude oil from OPEC Member Countries — 14.24m b/d or 72.4 per cent — was exported to Asia. Considerable volumes of crude oil — about 3.27m b/d — were also exported to Europe in 2021, compared with 3.13m b/d recorded in 2020. OECD Americas imported 0.94m b/d of crude oil from OPEC Member Countries, which was about 0.10m b/d, or 11.5 per cent above the 2020 volumes. Exports of petroleum products from OPEC Member Countries averaged 4.03m b/d during 2021, up by around 0.551m b/d, or 15.8 per cent, compared to 2020. Imports of petroleum products by OPEC Member Countries averaged at 1.50m b/d in 2021, roughly 0.015m b/d, or 1.0 per cent, lower than in 2020.

► World **proven crude oil reserves** stood at 1,545 billion barrels (bn b) at the end of 2021, roughly at 2020 levels. Proven crude oil reserves in OPEC Member Countries declined marginally to 1,242bn b at the end of 2021, following an increase during 2020. At the end of 2021, world proven natural gas reserves fell by 0.5 per cent to approximately 205.9 trillion standard cubic metres (tr s cu m). Proven natural gas reserves in OPEC Member Countries stood at 74.24tr s cu m at the end of 2021, up 0.8 per cent from the level at the end of 2020.

► The **OPEC Reference Basket** averaged \$69.89/b in nominal terms during 2021, up from \$41.47/b in 2020, an increase of \$28.42/b, or 68.5 per cent.

SECTION 1

Summary

Table 1.1
OPEC Members' facts and figures, 2021

	Algeria	Angola	Congo	Equatorial Guinea	Gabon	IR Iran	Iraq	Kuwait	Libya	Nigeria	Saudi Arabia	United Arab Emirates	Venezuela	OPEC
Population <i>million inhabitants</i>	45.00	32.10	5.66	1.45	2.14	84.98	41.19	4.34	6.71	218.40	35.46	9.56	31.95	518.93
Land area ¹ <i>1,000 sq km</i>	2,382	1,248	342	28	268	1,648	438	18	1,760	924	2,150	84	916	12,205
GDP per capita \$	3,623	2,321	2,272	8,747	8,975	2,707	5,047	31,216	4,821	1,998	23,507	42,884	1,455	5,038
GDP at market prices <i>million \$</i>	163,045	74,495	12,848	12,701	19,161	230,014	207,889	135,352	32,352	436,450	833,541	409,967	46,501	2,614,316
GDP growth <i>real PPP %</i>	3.9	0.6	0.0	1.0	1.8	2.3	3.0	2.4	55.0	3.6	3.3	3.4	1.0	3.3
Value of exports <i>million \$</i>	43,344	33,667	7,291	4,376	5,888	58,132	86,298	72,386	28,986	46,868	286,502	425,160	9,990	1,108,888
Value of imports <i>million \$</i>	43,021	18,839	4,832	2,039	3,035	58,799	66,217	55,998	18,972	51,667	213,016	347,529	10,352	894,315
Current account balance <i>million \$</i>	-3,470	8,398	526	354	-546	15,004	22,319	32,574	5,177	3,638	44,324	47,978	477	176,753
Value of petroleum exports <i>million \$</i>	23,316	28,440	5,785	2,366	4,641	25,313	79,788	56,545	27,485	41,378	202,166	54,595	8,816	560,633
Proven crude oil reserves <i>million barrels</i>	12,200	2,516	1,811	1,100	2,000	208,600	145,019	101,500	48,363	37,050	267,192	111,000	303,468	1,241,819
Natural gas reserves <i>billion cu m</i>	4,504	301	284	39	26	33,988	3,714	1,784	1,505	5,848	8,507	8,200	5,541	74,242
Crude oil production <i>1,000 b/d</i>	911	1,124	267	93	181	2,392	3,971	2,415	1,207	1,323	9,125	2,718	636	26,363
Natural gas marketed production <i>million cu m</i>	105,043	8,820	415	7,047	454	257,119	9,586	12,728	24,244	48,572	120,485	54,485	23,720	672,718
Refinery capacity <i>1,000 b/cd</i>	677	80	21	na	25	2,202	1,116	800	634	486	3,327	1,272	2,276	12,915
Refinery throughput <i>1,000 b/d</i>	643	40	17	na	19	1,691	623	686	134	5	2,475	1,063	521	7,916
Output of petroleum products <i>1,000 b/d</i>	621	40	16	na	19	1,673	740	845	126	5	2,548	1,041	270	7,943
Oil demand <i>1,000 b/d</i>	418	100	7	5	45	1,777	621	482	186	495	2,966	916	232	8,249
Crude oil exports ² <i>1,000 b/d</i>	446	1,080	251	93	181	763	3,440	1,740	1,091	1,592	6,227	2,305	448	19,656
Exports of petroleum products <i>1,000 b/d</i>	493	29	4	0	10	333	158	604	89	11	1,344	891	67	4,034
Imports of petroleum products <i>1,000 b/d</i>	21	55	0	4	6	99	107	34	133	488	361	129	69	1,505
Natural gas exports <i>million cu m</i>	54,759	5,084	0	4,694	0	18,425	0	0	8,000	38,464	0	7,849	0	137,275

Notes:

1. Land area figures as per official websites.
2. Crude oil exports may include lease condensates and volumes of oil in transit.

Table 1.2
OPEC Members' crude oil production allocations

(1,000 b/d)

	Apr 82– Mar 83	Apr 83– Oct 84	Nov 84– Aug 86	Sep 86– Oct 86	Nov 86	Dec 86	Jan 87– Jun 87	Jul 87– Dec 87	Jan 88– Dec 88	Jan 89– Jun 89
	1/	2/	3/	4/	5/	6/	7/	8/	9/	10/
Algeria	650	725	663	663	669	669	635	667	667	695
Gabon	150	150	137	137	160	160	152	159	159	166
IR Iran	1,200	2,400	2,300	2,300	2,317	2,317	2,255	2,369	2,369	2,640
Iraq	1,200	1,200	1,200	1,200	—	—	1,466	1,540	—	2,640
Kuwait	800	1,050	900	900	921	999	948	996	996	1,037
Libya	750	1,100	990	990	999	999	948	996	996	1,037
Nigeria	1,300	1,300	1,300	1,300	1,304	1,304	1,238	1,301	1,301	1,355
Saudi Arabia	7,150	5,000	4,353	4,353	4,353	4,353	4,133	4,343	4,343	4,524
United Arab Emirates	1,000	1,100	950	950	950	950	902	948	948	988
Venezuela	1,500	1,675	1,555	1,555	1,574	1,574	1,495	1,571	1,571	1,636
OPEC	15,700	15,700	14,348	14,348			14,172	14,890		16,718
OPEC excl Iraq					13,247	13,325			13,350	

	Jul 89– Sep 89	Oct 89– Dec 89	Jan 90– Jul 90	Aug 90	Apr 91– Sep 91	Oct 91– Jan 92	Feb 92– Sep 92	Oct 92– Dec 92	Jan 93– Feb 93	Mar 93– Sep 93
	11/	12/	13/	14/	15/	16/	17/	18/	19/	20/
Algeria	733	771	827	827	827	nd	760	nd	764	732
Gabon	175	184	197	197	285	nd	273	nd	293	281
IR Iran	2,783	2,926	3,140	3,140	3,217	nd	3,184	nd	3,490	3,340
Iraq	2,783	2,926	3,140	3,140	—	nd	505	nd	500	400
Kuwait	1,093	1,149	1,500	1,500	—	nd	812	nd	1,500	1,600
Libya	1,093	1,149	1,233	1,233	1,425	nd	1,395	nd	1,409	1,350
Nigeria	1,428	1,501	1,611	1,611	1,840	nd	1,751	nd	1,857	1,780
Saudi Arabia	4,769	5,014	5,380	5,380	8,034	nd	7,887	nd	8,395	8,000
United Arab Emirates	1,041	1,094	1,095	1,500	2,320	nd	2,244	nd	2,260	2,161
Venezuela	1,724	1,812	1,945	1,945	2,235	nd	2,147	nd	2,360	2,257
OPEC	17,622	18,526	20,068	20,473	20,183^a	23,650[*]	20,958	24,200[*]	22,828	21,901

Notes: Totals may not add up due to independent rounding.

— No production level allocated.

nd No distribution made.

[^] Includes Ecuador and Qatar.

[#] Includes Indonesia and Qatar.

^{*} Includes Ecuador, Indonesia and Qatar.

a. OPEC excluding Kuwait and Iraq.

b. OPEC excluding IR Iran and Iraq.

c. OPEC excluding Libya and Nigeria.

d. OPEC excluding IR Iran, Libya and Venezuela.

Agreed at the:

1/ 63rd [Extraordinary] Meeting of the OPEC Conference, March 19–20, 1982.

2/ 67th [Extraordinary] Meeting of the OPEC Conference, March 14, 1983. No production level allocated to Saudi Arabia which acted as the swing producer. Venezuela: 1.7 mb/d including condensates. Nigeria: At the 70th Meeting of the OPEC Conference, July 10–11, 1984, a temporary production rise to 1.4 mb/d and 1.45 mb/d in August 1984 and September 1984, respectively, was decided.

3/ 71st [Extraordinary] Meeting of the OPEC Conference, October 29–31, 1984. Retained at the 75th [Extraordinary] Meeting of the OPEC Conference, October 4, 1985.

4/ 78th Meeting of the OPEC Conference, June 25–30, 1986, and July 28–August 5, 1986, with the exception of Iraq.

5/ 79th [Extraordinary] Meeting of the OPEC Conference, October 6–22, 1986, with the exception of Iraq.

6/ 79th [Extraordinary] Meeting of the OPEC Conference, October 6–22, 1986, with the exception of Iraq.

7/ 80th Meeting of the OPEC Conference, December 11–20, 1986.

8/ 81st Meeting of the OPEC Conference, June 25–27, 1987.

9/ 82nd Meeting of the OPEC Conference, December 9–14, 1987, with the exception of Iraq. Extended at the 83rd Meeting of the OPEC Conference, June 11–14, 1988, with the exception of Iraq.

10/ 84th Meeting of the OPEC Conference, November 21–28, 1988.

11/ 85th Meeting of the OPEC Conference, June 5–7, 1989.

12/ 3rd Meeting of the Eight-Minister Monitoring Committee, September 23–27, 1989.

13/ 86th Meeting of the OPEC Conference, November 25–28, 1989.

14/ 87th Meeting of the OPEC Conference, July 26–27, 1990. September 2000–March 2001: Oil Ministers' informal consultations and 1st Ministerial Monitoring Committee, August 26–29, 1990 (interim course of action: OPEC shall consequently increase production in accordance with need). Retained August 1990 agreement at the 88th Meeting of the OPEC Conference, December 12–13, 1990.

15/ 3rd Meeting of the Ministerial Monitoring Committee, March 11–12, 1991. Reservations were made by Algeria and IR Iran as to the total OPEC production level. Reiterated without reservations at the 89th Meeting of the OPEC Conference, June 4, 1991.

16/ 4th Meeting of the Ministerial Monitoring Committee, September 24–25, 1991. Retained at the 90th Meeting of the Conference, November 26–27, 1991.

17/ 6th Meeting of the Ministerial Monitoring Committee, February 12–15, 1992. Reservations were made by IR Iran as to the total OPEC production level and by Saudi Arabia as to their allocated production level. Rollover (inclusive of reservations) at the 91st Meeting of the OPEC Conference, May 21–22, 1992. The Conference also decided to allow any additional production from Kuwait.

18/ 9th Meeting of the Ministerial Monitoring Committee, September 16–17, 1992. Reaffirmed to allow for any additional production from Kuwait.

19/ 92nd Meeting of the OPEC Conference, November 25–27, 1992, with full support of Member Countries, except Iraq and the allowance of additional volumes to Kuwait as they become available during the 1Q93.

20/ 10th Meeting of the Ministerial Monitoring Committee, February 13–16, 1993 with full support of Member Countries, except Iraq. Rollover of this agreement at the 93rd Meeting of the OPEC Conference, June 8–10, 1993, with full support of Member Countries, except Iraq and Kuwait.

Table 1.2
OPEC Members' crude oil production allocations

(1,000 b/d)

	Oct 93– Jun 96	Jul 96– Dec 97	Jan 98– Mar 98	Apr 98– Jun 98	Jul 98– Mar 99	Apr 99– Mar 00	Apr 00– Jun 00	Jul 00– Sep 00	Oct 1, 00– Oct 30, 00	Oct 31, 00 –Jan 01
	21/	22/	23/	24/	25/	26/	27/	28/	29/	30/
Algeria	750	750	909	50	788	731	788	811	837	853
Gabon	287	—	—	—	—	—	—	—	—	—
IR Iran	3,600	3,600	3,942	140	3,318	3,359	—	3,727	3,844	3,917
Iraq	400	1,200	1,314	—	—	—	—	—	—	—
Kuwait	2,000	2,000	2,190	125	1,980	1,836	1,980	2,037	2,101	2,141
Libya	1,390	1,390	1,522	80	1,323	1,227	1,323	1,361	1,404	1,431
Nigeria	1,865	1,865	2,042	125	2,033	1,885	2,033	2,091	2,157	2,198
Saudi Arabia	8,000	8,000	8,761	300	8,023	7,438	8,023	8,253	8,512	8,674
United Arab Emirates	2,161	2,161	2,366	125	2,157	2,000	2,157	2,219	2,289	2,333
Venezuela	2,359	2,359	2,583	200	2,845	2,720	2,845	2,926	3,019	3,077
OPEC	22,812	23,325	25,630							
OPEC excl Iraq				1,145	22,467	21,196	19,149^b	23,425	24,163	24,624
Target				23,762						

	Feb 01– Mar 01	Apr 01– Aug 01	Sep 01– Dec 01	Jan 02– Dec 02	Jan 03	Feb 03– May 03	Jun 03– Oct 03	Nov 03– Mar 04	Apr 04– Jun 04	Jul 04
	31/	32/	33/	34/	35/	36/	37/	38/	39/	40/
Algeria	805	773	741	693	735	782	811	782	750	814
IR Iran	3,698	3,552	3,406	3,186	3,377	3,597	3,729	3,597	3,450	3,744
Iraq	—	—	—	—	—	—	—	—	—	—
Kuwait	2,021	1,941	1,861	1,741	1,845	1,966	2,038	1,966	1,886	2,046
Libya	1,350	1,296	1,242	1,162	1,232	1,312	1,360	1,312	1,258	1,365
Nigeria	2,075	1,993	1,911	1,787	1,894	2,018	2,092	2,018	1,936	2,101
Saudi Arabia	8,189	7,865	7,541	7,053	7,476	7,963	8,256	7,963	7,638	8,288
United Arab Emirates	2,201	2,113	2,025	1,894	2,007	2,138	2,217	2,138	2,051	2,225
Venezuela	2,902	2,786	2,670	2,497	2,647	2,819	2,923	2,819	2,704	2,934
OPEC excl Iraq	23,241	22,319	21,397	20,013	21,213	22,595	23,425	22,595	21,673	23,517

- 21/ 94th (Extraordinary) Meeting of the OPEC Conference, September 25–29, 1993, with full support of Member Countries, except Iraq. Maintained at the 12th Meeting of the Ministerial Monitoring Committee, March 25–26, 1994, with full support of Member Countries, except Iraq. Maintained at the 97th, 98th and 99th Meeting of the OPEC Conference, November 21–22, 1994, June 19–20, 1995, and November 21–22, 1995, respectively.
- 22/ 100th Meeting of the OPEC Conference, June 5–7, 1996. The remaining volume of 1.2 mb/d is to be supplied by Iraq. Rollover of the agreement at the 101st and the 102nd Meeting of the OPEC Conference, November 27–28, 1996, and June 25–26, 1997, respectively.
- 23/ 103rd Meeting of the OPEC Conference, November 26–December 1, 1997. The remaining volume of 1,314,080 b/d is to be supplied by Iraq.
- 24/ 104th Meeting (Extraordinary) of the OPEC Conference, March 30, 1998. Data reflects temporary production adjustments from OPEC excluding Iraq production in February 1998 as reported by selected secondary sources. Iraq is not called upon to participate in this agreement.
- 25/ 105th Meeting of the OPEC Conference, June 24, 1998. Iraq is not called upon to participate in this agreement.
- 26/ 107th Meeting of the OPEC Conference, March 23, 1999. Reaffirmed strong commitment to the agreement at the 108th Meeting of the OPEC Conference, September 22, 1999. Iraq is not called upon to participate in this agreement.
- 27/ 109th Meeting of the OPEC Conference, March 27–29, 2000. Agreement of OPEC Member Countries excluding IR Iran and Iraq.
- 28/ 110th (Extraordinary) Meeting of the OPEC Conference, June 21, 2000. Iraq is not called upon to participate in this agreement.
- 29/ 111th Meeting of the OPEC Conference, September 10–11, 2000. Iraq is not called upon to participate in this agreement.
- 30/ 111th Meeting of the OPEC Conference, September 10–11, 2000; including additional 500,000 b/d (price band mechanism) as announced by the OPEC President on October 30, 2000, and effective from October 31, 2000. Iraq is not called upon to participate in this agreement.
- 31/ 113th (Extraordinary) Meeting of the OPEC Conference, January 17, 2001. Iraq is not called upon to participate in this agreement.
- 32/ 114th Meeting of the OPEC Conference, March 16–17, 2001. Retained at the 115th (Extraordinary) and 116th (Extraordinary) Meeting of the OPEC Conference, June 5 and July 3, 2001, respectively. Iraq is not called upon to participate in this agreement.
- 33/ OPEC Conference, July 25, 2001. Retained at the 117th Meeting of the OPEC Conference, September 26–27, 2001. Iraq is not called upon to participate in this agreement.
- 34/ Announced during the 118th (Extraordinary) Meeting of the OPEC Conference, November 14, 2001, and confirmed its implementation during the Consultative Meeting of the OPEC Conference in Cairo, December 28, 2001. Retained at the 119th (Extraordinary), 120th (Extraordinary) and 121st Meeting of the OPEC Conference, March 15, June 26 and September 19, 2002, respectively. Iraq is not called upon to participate in this agreement.
- 35/ 122th (Extraordinary) Meeting of the OPEC Conference, December 12, 2002. Iraq is not called upon to participate in this agreement.
- 36/ 123rd (Extraordinary) Meeting of the OPEC Conference, January 12, 2003. Retained at the 124th Meeting of the OPEC Conference, March 11, 2003. Iraq is not called upon to participate in this agreement.
- 37/ Consultative Meeting of the OPEC Conference, April 24, 2003. Retained at the 125th (Extraordinary) and 126th (Extraordinary) Meeting of the OPEC Conference, June 11 and July 31, 2003, respectively. Iraq is not called upon to participate in this agreement.
- 38/ 127th Meeting of the OPEC Conference, September 24, 2003. Retained at the 128th (Extraordinary) and 129th (Extraordinary) Meeting of the OPEC Conference, December 4, 2003, and February 10, 2004, respectively. Iraq is not called upon to participate in this agreement.
- 39/ 129th (Extraordinary) Meeting of the OPEC Conference, February 10, 2004. Reconfirmed at the 130th Meeting of the OPEC Conference, March 31, 2004. Iraq is not called upon to participate in this agreement.
- 40/ 131st (Extraordinary) Meeting of the OPEC Conference, June 3, 2004. Iraq is not called upon to participate in this agreement.

Table 1.2
OPEC Members' crude oil production allocations

(1,000 b/d)

	Aug 04– Oct 04	Nov 1, 04– Mar 16, 05	Mar 17, 05– Jun 30, 05	Jul 05– Oct 06	Nov 06– Jan 07	Feb 07– Oct 07	Nov 07– Dec 07	Jan 08– Sep 08	Oct 08	Nov 08– Dec 08
	41/ 830	42/ 862	43/ 878	44/ 894	45/ 59	46/ 25	47/ nd	48/ nd	49/ nd	50/ 71
Algeria	—	—	—	—	—	—	—	—	—	—
Angola	3,817	3,964	4,037	4,110	176	73	nd	nd	nd	199
IR Iran	—	—	—	—	—	—	—	—	—	—
Iraq	2,087	2,167	2,207	2,247	100	42	nd	nd	nd	132
Kuwait	1,392	1,446	1,473	1,500	72	30	nd	nd	nd	89
Libya	2,142	2,224	2,265	2,306	100	42	nd	nd	nd	113
Nigeria	8,450	8,775	8,937	9,099	380	158	nd	nd	nd	466
Saudi Arabia	2,269	2,356	2,400	2,444	101	42	nd	nd	nd	134
United Arab Emirates	2,992	3,107	3,165	3,223	138	57	nd	nd	nd	129
Venezuela	23,979	24,901	25,362	25,823						
OPEC excl Iraq										1,432
OPEC excl Angola and Iraq					1,126	469	500 [#]			
Target OPEC excl Angola and Iraq					26,300 [#]	25,800 [#]	27,253 [#]			
Target OPEC excl Iraq								29,673 [*]	28,808 [^]	27,308 [^]

	Jan 09– Dec 11	Jan 12– Dec 15	Jan 17– May 17	Jun 17– Dec 18	Jan 19– May 19	Jun 19– Dec 19	Jan 20– Mar 20	May 20– Jul 20	Aug 20– Dec 20	Jan 21 Apr 21
	51/ nd	52/ nd	53/ 1,039	54/ 1,039	55/ 1,025	56/ 1,025	57/ 1,013	58/ 816	58/ 864	59/ 876
Algeria	nd	nd	1,673	1,673	1,481	1,481	1,481	1,180	1,249	1,267
Angola	—	—	—	—	315	315	311	251	266	269
Congo	—	—	—	178	123	123	122	98	104	105
Equatorial Guinea	—	—	193	193	181	181	179	144	153	155
Gabon	nd	nd	3,797	3,797	—	—	—	—	—	—
IR Iran	—	nd	4,351	4,351	4,512	4,512	4,462	3,592	3,804	3,857
Iraq	nd	nd	2,707	2,707	2,724	2,724	2,669	2,168	2,297	2,329
Kuwait	nd	nd	—	—	—	—	—	—	—	—
Libya	nd	nd	—	—	1,685	1,774	1,753	1,412	1,495	1,516
Nigeria	nd	nd	10,058	10,058	10,311	10,311	10,144	8,492	8,993	9,119
Saudi Arabia	nd	nd	2,874	2,874	3,072	3,072	3,012	2,446	2,590	2,626
United Arab Emirates	nd	nd	1,972	1,972	—	—	—	—	—	—
Venezuela			28,664 ^c	28,842 ^c	25,429 ^d	25,518 ^d	25,146 ^d	20,599 ^d	21,815 ^d	22,119 ^d
OPEC										
Target OPEC excl Iraq	24,845 [^]									
Target OPEC		30,000 [^]	32,500 [*]							

- 41/ 131st (Extraordinary) Meeting of the OPEC Conference, June 3, 2004. Iraq is not called upon to participate in this agreement.
- 42/ 132nd Meeting of the OPEC Conference, September 15, 2004. Iraq is not called upon to participate in this agreement. During the 133rd (Extraordinary) Meeting of the OPEC Conference, December 10, 2004, Member Countries agreed to collectively reduce the over-production by 1 mb/d from their current actual output, effective January 1, 2005. Agreement of 132nd Meeting is retained at the 134th (Extraordinary) Meeting of the OPEC Conference, January 30, 2005.
- 43/ 135th Meeting of the OPEC Conference, March 16, 2005. Iraq is not called upon to participate in this agreement. The President of the Conference is authorized, after consultation with fellow Heads of Delegation, to announce an additional 500,000 b/d increase until its next Meeting, if prices remain at current high levels or continue to further rise.
- 44/ 136th (Extraordinary) Meeting of the OPEC Conference, June 15, 2005. Iraq is not called upon to participate in this agreement. The President of the Conference is authorized, after consultation with fellow Heads of Delegation, to announce an additional 500,000 b/d increase until its next Meeting, if prices remain at current high levels or continue to further rise. The 137th OPEC Conference, September 20, 2005, agreed to make available to the market the spare capacity of 2 mb/d, should it be called for, for a period of three months, starting October 1, 2005. The 138th (December 12, 2005), the 139th (Extraordinary, January 31, 2006), the 140th (March 8, 2006) and the 141st (Extraordinary, June 1, 2006) Conference retained the OPEC production level as agreed on June 15, 2005.
- 45/ Consultative Meeting of the OPEC Conference, October 19–20, 2006. Data reflects interim production adjustments from OPEC excluding Iraq production in September 2006. Iraq is not called upon to participate in this agreement.
- 46/ 143rd (Extraordinary) Meeting of the OPEC Conference, December 14, 2006. Data reflects a further production adjustment to the decision taken in Doha, October 19–20, 2006. Iraq is not called upon to participate in this agreement.
- 47/ 145th Meeting of the OPEC Conference, September 11, 2007. Angola and Iraq are not called upon to participate in this agreement. Data reflect production increase of 500,000 b/d for OPEC (excluding Angola and Iraq) to achieve 27.253 mb/d.
- 48/ 146th (Extraordinary) Meeting of the OPEC Conference, December 5, 2007. Iraq is not called upon to participate in the agreement.
- 49/ 149th Meeting of the OPEC Conference, September 9–10, 2008: The Conference agreed to abide to September 2007 production allocations (adjusted to include new Members Angola and Ecuador and excluding Indonesia and Iraq), totalling to 28.8 mb/d.
- 50/ 150th (Extraordinary) Meeting of the OPEC Conference, October 24, 2008: Data reflects a production adjustment of 1.5 mb/d to achieve 27.31 mb/d. Iraq and Indonesia are not called upon to participate in the agreement.
- 51/ The 151th (Extraordinary) Meeting of the Conference, December 17, 2008, agreed to reduce OPEC production excluding Iraq production by a total of 4.2 mb/d from September levels of the actual production based on secondary sources. Iraq is not called upon to participate in the agreement.
- 52/ The 160th Meeting of the Conference, December 14, 2011, decided to maintain the total OPEC production level of 30.0 mb/d. This agreement was maintained at the 161st (June 14, 2012), the 162nd (December 12, 2012), the 163rd (May 31, 2013), the 164th (December 4, 2013), the 165th (June 11, 2014), the 166th (November 27, 2014) and — for the last time — at the 167th (June 5, 2015) Meeting of the Conference.
- 53/ The 171st Meeting of the Conference, November 30, 2016, decided to reduce its production by around 1.2 mb/d to bring its ceiling to 32.5 mb/d, effective of January 1, 2017. Agreed crude oil production levels were allocated, with the exception of Libya and Nigeria.
- 54/ The 172nd Meeting of the Conference, May 25, 2017, decided to extend its production adjustments for a further period of nine months. Furthermore, the Conference approved Equatorial Guinea's admission to the Organization with immediate effect (the table is adjusted accordingly). The 173rd Meeting of the Conference, November 30, 2017, amended the adjustment to take effect for the whole year 2018.
- 55/ The 175th Meeting of the Conference, December 6–7, 2018, decided to adjust OPEC overall production by 800,000 b/d from October 2018 levels, effective as of January 2019, for an initial period of six months, with a review in April 2019.
- 56/ The 176th Meeting of the OPEC Conference, July 1, 2019, decided to extend the production adjustments agreed at the 175th Meeting of the OPEC Conference for an additional period of nine months and to adjust the required production level for Nigeria from 1.685 mb/d to 1.774 mb/d effective June 2019.
- 57/ The 177th Meeting of the OPEC Conference, December 6, 2019, decided to support additional adjustments to the adjustment levels as agreed at the 175th Meeting of the OPEC Conference.
- 58/ The 9th and 10th OPEC and non-OPEC Ministerial Meetings, April 9/10 and 12, 2020, agreed to adjust downwards overall crude oil production from OPEC and participating non-OPEC countries by 9.7 mb/d, starting on May 1, 2020, for an initial period of two months that concludes on June 30, 2020. The 179th Meeting of the OPEC Conference, as well as the 11th OPEC and non-OPEC Ministerial Meeting, held on June 6, 2020, agreed on extending the production adjustments pertaining in May and June by one further month.
- 59/ The 12th OPEC and non-OPEC Ministerial Meeting, January 5, 2021, agreed to increase production from OPEC and participating non-OPEC countries by 500,000 b/d starting in January 2021, and adjusting the production reduction from 7.7 mb/d to 7.2 mb/d. The decision for OPEC production allocation was reconfirmed by the 13th and 14th OPEC and non-OPEC Ministerial Meeting, January 5, 2021, and March 4, 2021.

Table 1.2
OPEC Members' crude oil production allocations

(1,000 b/d)

	May 21	Jun 21	Jul 21	Aug 21	Sep 21	Oct 21	Nov 21	Dec 21	Jan 22	Feb 22
	60/	60/	60/	61/	61/	62/	63/	64/	65/	66/
Algeria	887	898	912	922	932	942	952	962	972	982
Angola	1,283	1,298	1,319	1,333	1,348	1,363	1,377	1,392	1,406	1,421
Congo	273	276	281	284	287	290	293	296	300	303
Equatorial Guinea	107	108	110	111	112	114	115	116	117	118
Gabon	157	159	161	163	165	166	168	170	172	173
IR Iran	–	–	–	–	–	–	–	–	–	–
Iraq	3,905	3,954	4,016	4,061	4,105	4,149	4,193	4,237	4,281	4,325
Kuwait	2,358	2,387	2,425	2,451	2,478	2,505	2,532	2,558	2,585	2,612
Libya	–	–	–	–	–	–	–	–	–	–
Nigeria	1,535	1,554	1,579	1,596	1,614	1,631	1,649	1,666	1,683	1,701
Saudi Arabia	9,232	9,347	9,495	9,600	9,704	9,809	9,913	10,018	10,122	10,227
United Arab Emirates	2,659	2,692	2,735	2,765	2,795	2,825	2,855	2,885	2,916	2,946
Venezuela	–	–	–	–	–	–	–	–	–	–
OPEC	22,396^d	22,673^d	23,033^d	23,286^d	23,540^d	23,794^d	24,047^d	24,300^d	24,554^d	24,808^d

	Mar 22	Apr 22	May 22	Jun 22	Jul 22
	67/	68/	69/	70/	71/
Algeria	992	1,002	1,013	1,023	1,039
Angola	1,435	1,450	1,465	1,480	1,502
Congo	306	309	312	315	320
Equatorial Guinea	120	121	122	123	125
Gabon	175	177	179	181	183
IR Iran	–	–	–	–	–
Iraq	4,370	4,414	4,461	4,509	4,580
Kuwait	2,639	2,665	2,694	2,724	2,768
Libya	–	–	–	–	–
Nigeria	1,718	1,735	1,753	1,772	1,799
Saudi Arabia	10,331	10,436	10,549	10,663	10,833
United Arab Emirates	2,976	3,006	3,040	3,075	3,127
Venezuela	–	–	–	–	–
OPEC	25,062^d	25,315^d	25,588^d	25,865^d	26,276^d

- 60/ The 15th OPEC and non-OPEC Ministerial Meeting, April 1, 2021, approved the adjustment of the production levels for May, June and July 2021.
- 61/ The 19th OPEC and non-OPEC Ministerial Meeting, July 18, 2021, approved to adjust upward their overall production by 400,000 b/d on a monthly basis starting August 2021.
- 62/ The 20th OPEC and non-OPEC Ministerial Meeting, September 1, 2021, reconfirmed the production adjustment plan from the 19th OPEC and non-OPEC Ministerial Meeting and approved to adjust upward the monthly overall production by 400,000 b/d for the month of October 2021.
- 63/ The 21st OPEC and non-OPEC Ministerial Meeting, October 4, 2021, reconfirmed the production adjustment plan from the 19th OPEC and non-OPEC Ministerial Meeting and approved to adjust upward the monthly overall production by 400,000 b/d for the month of November 2021.
- 64/ The 22nd OPEC and non-OPEC Ministerial Meeting, November 4, 2021, reconfirmed the production adjustment plan from the 19th OPEC and non-OPEC Ministerial Meeting and approved to adjust upward the monthly overall production by 400,000 b/d for the month of December 2021.
- 65/ The 23rd OPEC and non-OPEC Ministerial Meeting, December 2, 2021, reconfirmed the production adjustment plan from the 19th OPEC and non-OPEC Ministerial Meeting and approved to adjust upward the monthly overall production by 400,000 b/d for the month of January 2022.
- 66/ The 24th OPEC and non-OPEC Ministerial Meeting, January 4, 2022, reconfirmed the production adjustment plan from the 19th OPEC and non-OPEC Ministerial Meeting and approved to adjust upward the monthly overall production by 400,000 b/d for the month of February 2022.
- 67/ The 25th OPEC and non-OPEC Ministerial Meeting, February 2, 2022, reconfirmed the production adjustment plan from the 19th OPEC and non-OPEC Ministerial Meeting and approved to adjust upward the monthly overall production by 400,000 b/d for the month of March 2022.
- 68/ The 26th OPEC and non-OPEC Ministerial Meeting, March 2, 2022, reconfirmed the production adjustment plan from the 19th OPEC and non-OPEC Ministerial Meeting and approved to adjust upward the monthly overall production by 400,000 b/d for the month of April 2022.
- 69/ The 27th OPEC and non-OPEC Ministerial Meeting, March 31, 2022, reconfirmed the baseline adjustment, the production adjustment plan and the monthly production adjustment mechanism approved at the 19th OPEC and non-OPEC Ministerial Meeting and the decision to adjust upward the monthly overall production by 432,000 b/d for the month of May 2022.
- 70/ The 28th OPEC and non-OPEC Ministerial Meeting, May 5, 2022, reconfirmed the production adjustment plan and the monthly production adjustment mechanism approved at the 19th OPEC and non-OPEC Ministerial Meeting and the decision to adjust upward the monthly overall production by 432,000 b/d for the month of June 2022.
- 71/ The 29th OPEC and non-OPEC Ministerial Meeting, June 2, 2022, reconfirmed the production adjustment plan and the monthly production adjustment mechanism approved at the 19th OPEC and non-OPEC Ministerial Meeting and the decision to adjust upward the monthly overall production. Moreover, it advanced the planned overall production adjustment for the month of September and redistribute equally the 432,000 b/d production increase over the months of July and August 2022. Therefore, July production will be adjusted upward by 648,000 b/d.

SECTION 2

Macro-economics

Table 2.1
OPEC Members' population

(million inhabitants)

	2017	2018	2019	2020	2021	change 21/20
Algeria	41.721	42.578	43.424	44.244	45.000	0.756
Angola	28.360	29.250	30.176	31.128	32.098	0.970
Congo	5.111	5.244	5.381	5.518	5.656	0.138
Equatorial Guinea	1.268	1.314	1.360	1.406	1.452	0.046
Gabon	2.025	2.053	2.080	2.108	2.135	0.027
IR Iran	81.423	82.359	83.265	84.139	84.981	0.842
Iraq	37.140	38.124	39.128	40.150	41.191	1.041
Kuwait	4.083	4.227	4.420	4.465	4.336	-0.129
Libya	6.448	6.513	6.578	6.644	6.710	0.066
Nigeria	197.697	202.988	208.282	213.402	218.402	5.000
Saudi Arabia	32.552	33.414	34.218	35.013	35.459	0.446
United Arab Emirates	9.304	9.367	9.504	9.282	9.560	0.278
Venezuela	31.431	31.828	32.220	32.375	31.952	-0.423
OPEC	478.562	489.259	500.035	509.874	518.932	9.058

Table 2.2
OPEC Members' GDP at current market prices

(m \$)

	2017	2018	2019	2020	2021
Algeria	167,402	173,882	171,758	145,009	163,045
Angola	122,124	101,615	84,516	58,254	74,495
Congo	11,110	13,649	12,791	10,329	12,848
Equatorial Guinea	12,201	13,097	11,417	10,022	12,701
Gabon	14,620	17,210	16,875	15,339	19,161
IR Iran	416,706	217,240	211,264	175,165	230,014
Iraq	187,534	227,512	233,636	185,930	207,889
Kuwait	120,688	140,672	134,620	105,960	135,352
Libya	30,211	41,432	39,497	19,210	32,352
Nigeria	375,745	421,742	406,176	430,197	436,450
Saudi Arabia	688,586	816,579	803,616	703,368	833,541
United Arab Emirates	386,359	423,014	417,216	358,869	409,967
Venezuela	143,841	98,400	63,960	47,255	46,501
OPEC	2,677,128	2,706,044	2,607,342	2,264,907	2,614,316

Table 2.3

OPEC Members' real GDP growth rates PPP based weights

[%]

	2017	2018	2019	2020	2021
Algeria	1.4	1.2	0.8	-4.9	3.9
Angola	-0.1	-2.0	-0.7	-5.6	0.6
Congo	-4.4	-4.8	-0.4	-8.1	0.0
Equatorial Guinea	-5.7	-6.2	-6.0	-4.9	1.0
Gabon	0.5	0.8	3.9	-1.9	1.8
IR Iran	2.8	-2.3	-1.3	1.8	2.3
Iraq	-3.4	4.7	5.8	-15.7	3.0
Kuwait	-4.7	2.4	-0.6	-8.9	2.4
Libya	64.0	17.9	13.2	-59.7	55.0
Nigeria	0.8	1.9	2.2	-1.8	3.6
Saudi Arabia	-0.7	2.5	0.3	-4.1	3.3
United Arab Emirates	2.4	1.2	3.4	-6.1	3.4
Venezuela	-15.7	-19.6	-35.0	-30.0	1.0
OPEC	-0.4	0.0	-0.6	-5.7	3.3

Notes:

Aggregates were compiled on the basis of 2017 GDP weights using 2017 purchasing power parities (PPP).

Table 2.4

OPEC Members' values of exports of goods and services

[m \$]

	2017	2018	2019	2020	2021
Algeria	37,936	44,555	39,012	25,110	43,344
Angola	35,598	41,389	35,180	21,004	33,667
Congo	6,072	9,213	8,285	6,215	7,291
Equatorial Guinea	5,122	5,067	4,066	2,928	4,376
Gabon	5,347	6,158	6,753	4,842	5,888
IR Iran	113,241	87,693	48,821	39,131	58,132
Iraq	63,604	92,831	88,903	50,613	86,298
Kuwait	61,788	79,789	64,358	39,936	72,386
Libya	18,865	29,830	27,733	7,354	28,986
Nigeria	49,492	65,357	67,481	37,984	46,868
Saudi Arabia	239,993	314,917	285,860	182,848	286,502
United Arab Emirates	384,044	392,866	404,046	350,279	425,160
Venezuela	33,887	33,602	21,017	6,682	9,990
OPEC	1,054,989	1,203,267	1,101,514	774,927	1,108,888

Notes:

All figures fob.

Table 2.5

OPEC Members' values of petroleum exports*(m \$)*

	2017	2018	2019	2020	2021
Algeria	22,355	26,082	22,674	13,188	23,316
Angola	32,026	37,801	32,230	18,832	28,440
Congo	4,763	7,468	7,072	3,689	5,785
Equatorial Guinea	2,460	3,175	2,703	1,765	2,366
Gabon	3,596	4,419	4,767	2,714	4,641
IR Iran	52,728	60,519	19,402	7,914	25,313
Iraq	59,730	84,218	80,027	44,128	79,788
Kuwait	48,928	64,582	52,433	35,231	56,545
Libya	15,536	25,386	24,197	5,724	27,485
Nigeria	37,983	54,513	45,106	27,730	41,378
Saudi Arabia	170,241	231,585	200,487	119,359	202,166
United Arab Emirates	50,647	57,890	52,417	31,341	54,595
Venezuela	31,497	29,810	18,335	5,738	8,816
OPEC	532,490	687,447	561,851	317,353	560,633

Table 2.6

OPEC Members' values of imports of goods and services*(m \$)*

	2017	2018	2019	2020	2021
Algeria	55,607	56,235	49,971	40,596	43,021
Angola	28,257	25,887	22,299	15,146	18,839
Congo	4,954	6,005	4,908	4,278	4,832
Equatorial Guinea	2,917	3,034	2,258	1,723	2,039
Gabon	2,886	2,963	3,020	2,845	3,035
IR Iran	108,230	83,983	59,718	49,034	58,799
Iraq	48,506	56,876	72,283	54,725	66,217
Kuwait	56,293	61,566	33,478	27,781	55,998
Libya	10,556	13,786	17,184	13,748	18,972
Nigeria	49,508	73,851	93,969	71,285	51,667
Saudi Arabia	201,976	209,589	218,941	182,184	213,016
United Arab Emirates	290,783	307,692	321,525	297,236	347,529
Venezuela	13,364	13,505	7,008	7,786	10,352
OPEC	873,837	914,974	906,564	768,366	894,315

Notes:

All figures cif.

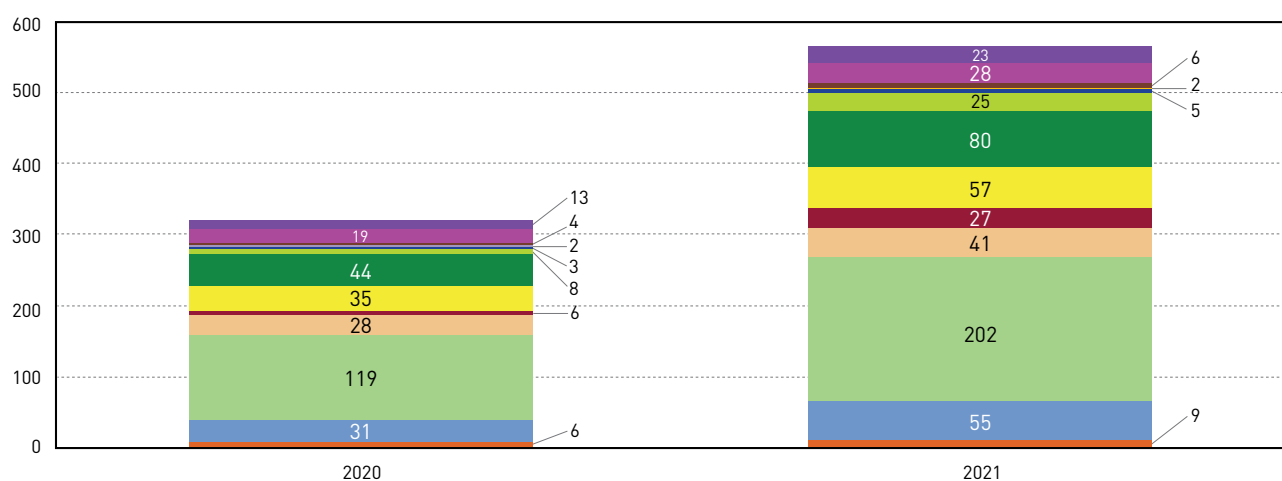
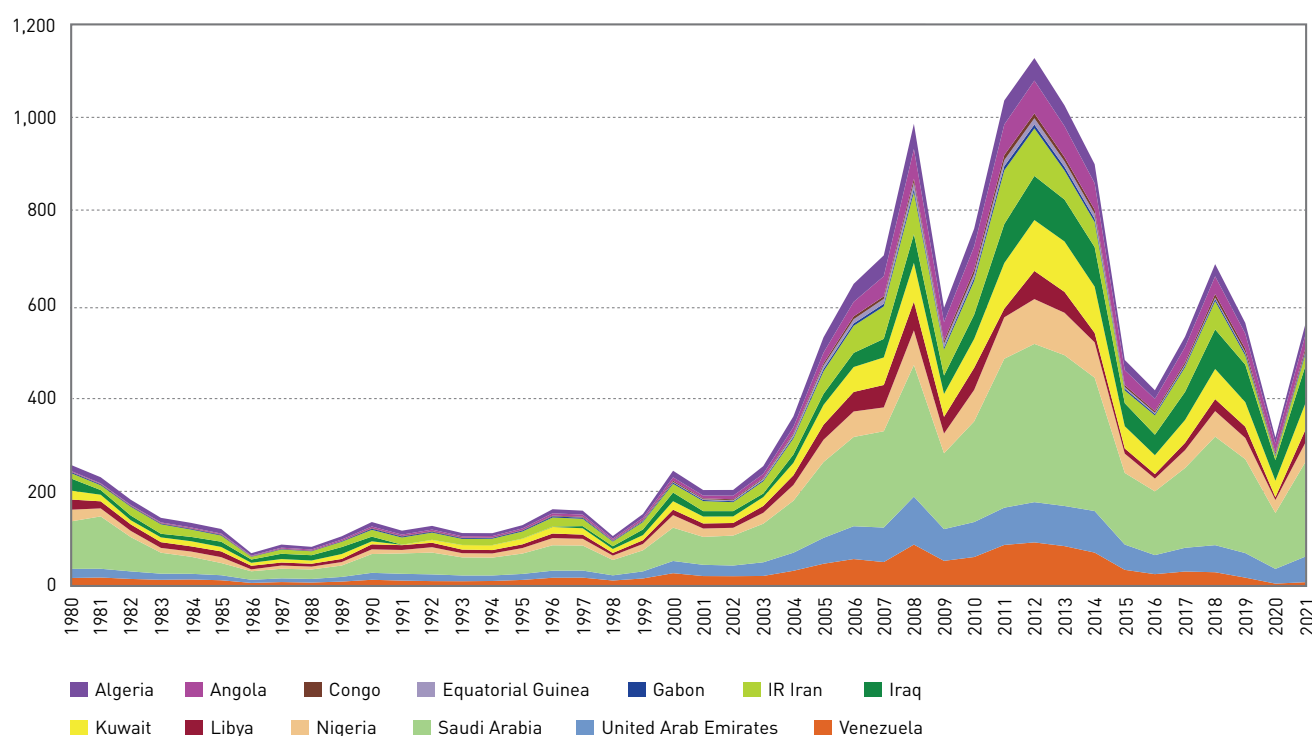
Table 2.7

Current account balances in OPEC Members*(m \$)*

	2017	2018	2019	2020	2021
Algeria	-21,763	-15,820	-18,813	-21,129	-3,470
Angola	-633	7,403	5,137	872	8,398
Congo	-189	1,057	1,208	-192	526
Equatorial Guinea	-518	-686	-283	-242	354
Gabon	-1,029	-640	-150	-1,273	-546
IR Iran	14,915	26,741	3,754	-708	15,004
Iraq	14,841	35,270	15,763	-6,250	22,319
Kuwait	9,603	20,395	22,141	23,049	32,574
Libya	4,513	11,361	4,363	-9,451	5,177
Nigeria	10,399	5,334	-14,627	-16,976	3,638
Saudi Arabia	10,464	71,972	38,230	-22,814	44,324
United Arab Emirates	27,502	40,490	37,332	21,103	47,978
Venezuela	8,706	8,613	6,733	-2,993	477
OPEC	76,813	211,489	100,789	-37,004	176,753

Graph 2.1
OPEC Members' values of petroleum exports

(bn \$)



SECTION 3

Oil data: upstream

Table 3.1

World proven crude oil reserves by country

(mb)

	2017	2018	2019	2020	2021	% change 21/20
OECD Americas	51,270	54,973	54,580	46,488	49,605	6.7
Canada ¹	5,423	5,192	4,906	5,005	5,005	0.0
Chile	150	150	150	150	150	0.0
Mexico	6,537	5,807	5,333	5,498	5,618	2.2
United States	39,160	43,824	44,191	35,835	38,832	8.4
OECD Europe	12,454	13,098	13,224	12,412	11,552	-6.9
Denmark	439	428	441	441	428	-2.9
Norway	7,918	8,645	8,523	7,902	7,525	-4.8
United Kingdom	2,500	2,500	2,700	2,500	2,000	-20.0
Others	1,597	1,525	1,560	1,569	1,599	1.9
OECD Asia and Pacific	2,493	2,483	2,477	2,475	1,833	-25.9
Australia	2,390	2,390	2,390	2,390	1,747	-26.9
Others	103	93	87	85	86	1.2
China	25,627	25,927	26,154	26,023	26,491	1.8
India	4,495	4,423	4,423	4,605	3,670	-20.3
Other Asia	13,583	13,415	13,577	12,841	12,829	-0.1
Brunei	1,100	1,100	1,100	1,100	1,100	0.0
Indonesia	3,310	3,170	3,150	2,480	2,440	-1.6
Malaysia	3,600	3,600	3,600	3,600	3,600	0.0
Vietnam	4,400	4,400	4,400	4,400	4,400	0.0
Others	1,173	1,145	1,327	1,261	1,289	2.2
Latin America	329,283	330,461	331,628	330,719	329,481	-0.4
Argentina	2,162	2,017	2,389	2,483	2,411	-2.9
Brazil	12,634	12,835	13,435	12,715	11,890	-6.5
Colombia	1,665	1,782	1,960	2,036	1,820	-10.6
Ecuador	8,273	8,273	8,273	8,273	8,273	0.0
Venezuela	302,809	303,806	303,806	303,561	303,468	0.0
Others	1,740	1,748	1,765	1,651	1,619	-1.9
Middle East	804,639	803,184	863,418	865,519	869,612	0.5
IR Iran	155,600	155,600	208,600	208,600	208,600	0.0
Iraq	147,223	145,019	145,019	145,019	145,019	0.0
Kuwait	101,500	101,500	101,500	101,500	101,500	0.0
Oman	5,373	5,373	5,373	5,373	5,373	0.0
Qatar	25,244	25,244	25,244	25,244	25,244	0.0
Saudi Arabia	266,260	267,026	267,073	267,082	267,192	0.0
Syrian Arab Republic	2,500	2,500	2,500	2,500	2,500	0.0
United Arab Emirates	97,800	97,800	105,000	107,000	111,000	3.7
Others	3,139	3,122	3,109	3,201	3,184	-0.5
Africa	127,677	126,972	125,228	124,560	120,210	-3.5
Algeria	12,200	12,200	12,200	12,200	12,200	0.0
Angola	8,384	8,160	7,783	7,231	2,516	-65.2
Congo	2,982	2,982	1,947	1,811	1,811	0.0
Egypt	3,325	3,325	3,075	3,075	3,300	7.3
Equatorial Guinea	1,100	1,100	1,100	1,100	1,100	0.0
Gabon	2,000	2,000	2,000	2,000	2,000	0.0
Libya	48,363	48,363	48,363	48,363	48,363	0.0
Nigeria	37,453	36,972	36,890	36,910	37,050	0.4
Sudans	5,000	5,000	5,000	5,000	5,000	0.0
Others	6,870	6,870	6,870	6,870	6,870	0.0
Russia	80,000	80,000	80,000	80,000	80,000	0.0
Other Eurasia	38,874	38,874	38,874	38,874	38,874	0.0
Azerbaijan	7,000	7,000	7,000	7,000	7,000	0.0
Belarus	198	198	198	198	198	0.0
Kazakhstan	30,000	30,000	30,000	30,000	30,000	0.0
Turkmenistan	600	600	600	600	600	0.0
Ukraine	395	395	395	395	395	0.0
Uzbekistan	594	594	594	594	594	0.0
Others	87	87	87	87	87	0.0
Other Europe	932	932	914	914	914	0.0
Total world	1,491,327	1,494,742	1,554,497	1,545,430	1,545,071	0.0
<i>of which</i>						
OPEC	1,183,674	1,182,528	1,241,281	1,242,377	1,241,819	0.0
OPEC percentage	79.4	79.1	79.9	80.4	80.4	
OECD	66,217	70,554	70,281	61,375	62,990	2.6

Notes: Figures as at year-end.

1. Data excludes oil sands.

Table 3.2
Active rigs by country

(number of rigs)

	2017	2018	2019	2020	2021	change 21/20
OECD Americas	1,153	1,252	989	475	778	303
Canada	205	141	135	91	149	58
Chile	3	2	1	2	2	0
Mexico	15	31	49	41	47	6
United States	930	1,078	804	341	580	239
OECD Europe	64	72	77	52	61	9
Germany	3	5	4	0	1	1
Italy	4	3	5	1	2	1
Netherlands	4	1	3	2	2	0
Norway	16	18	17	17	18	1
Poland	6	6	6	3	2	-1
United Kingdom	5	11	11	5	8	3
Others	26	28	31	24	28	4
OECD Asia and Pacific	15	24	29	17	23	6
Australia	14	22	25	14	19	5
New Zealand	0	1	2	1	2	1
Others	1	1	2	2	2	0
China¹	32	35	38	30	41	11
India	116	124	109	81	76	-5
Other Asia	74	67	65	49	68	19
Indonesia	34	24	26	26	32	6
Malaysia	7	7	12	3	7	4
Pakistan	20	19	15	13	15	2
Others	13	17	12	7	14	7
Latin America	325	304	265	78	112	34
Argentina	71	74	50	29	51	22
Bolivia	3	3	5	2	4	2
Brazil	14	10	14	9	8	-1
Colombia	25	30	33	14	29	15
Ecuador	14	28	5	5	11	6
Trinidad & Tobago	5	2	3	3	0	-3
Venezuela	189	151	149	12	3	-9
Others	4	6	6	4	6	2
Middle East	535	566	532	383	406	23
IR Iran	157	157	117	117	117	0
Iraq	54	80	77	30	44	14
Kuwait	78	85	87	85	78	-7
Oman	55	51	53	42	46	4
Qatar	17	9	14	8	10	2
Saudi Arabia	111	125	115	59	65	6
United Arab Emirates	59	57	66	40	42	2
Yemen	0	0	1	1	1	0
Others	4	2	2	1	3	2
Africa	118	173	173	129	192	63
Algeria	50	50	42	22	77	55
Angola	7	8	21	7	9	2
Congo	10	16	4	5	5	0
Egypt	22	27	31	17	30	13
Equatorial Guinea	2	2	1	0	3	3
Gabon	2	4	9	5	9	4
Libya	1	9	16	11	14	3
Nigeria	13	32	17	49	23	-26
Others	11	25	32	13	22	9
Other Europe	12	14	14	12	9	-3
Romania	7	10	10	10	4	-6
Others	5	4	4	2	5	3
Total world^{1,2}	2,444	2,631	2,291	1,306	1,766	460
<i>of which</i>						
OPEC	733	776	721	442	489	47
<i>OPEC percentage</i>	<i>30.0</i>	<i>29.5</i>	<i>31.5</i>	<i>33.8</i>	<i>27.7</i>	
OECD	1,232	1,348	1,095	544	862	318

Notes:

Figure as at year-end.

1. Excluding onshore rigs for China.

2. Excluding Russia and Other Eurasia.

Table 3.3
Wells completed in OPEC Members

	2017	2018	2019	2020	2021	change 21/20
Algeria	332	277	265	160	113	-47
Angola	43	32	104	14	27	13
Congo	64	80	15	9	4	-5
Equatorial Guinea	5	21	9	0	2	2
Gabon	11	27	59	23	16	-7
IR Iran	216	195	117	105	105	0
Iraq	139	160	190	130	108	-22
Kuwait ¹	555	488	379	444	380	-64
Libya	5	35	115	93	102	9
Nigeria	76	81	100	81	73	-8
Saudi Arabia ¹	594	588	580	466	314	-152
United Arab Emirates	364	399	440	320	254	-66
Venezuela	478	710	639	23	90	67
OPEC	2,882	3,093	3,012	1,868	1,588	-280
Total world	65,614	72,230	67,818	46,305	51,924	5,619

Notes:

1. Figures include share of wells completed from Neutral Zone.

Table 3.4
Daily and cumulative crude oil production in OPEC Members

(1,000 b)

Daily crude oil production

(average)

	1970	1980	1990	2000	2010	2021
Algeria	1,029	1,020	783	796	1,190	911
Angola	84	150	474	736	1,758	1,124
Congo	0	56	156	267	309	267
Equatorial Guinea	0	0	0	115	237	93
Gabon	109	175	274	283	233	181
IR Iran	3,829	1,467	3,135	3,661	3,544	2,392
Iraq	1,549	2,646	2,113	2,810	2,358	3,971
Kuwait ¹	2,990	1,664	859	1,996	2,312	2,415
Libya	3,318	1,832	1,389	1,347	1,487	1,207
Nigeria	1,083	2,058	1,727	2,054	2,048	1,323
Saudi Arabia ¹	3,799	9,901	6,413	8,095	8,166	9,125
United Arab Emirates	780	1,702	1,763	2,175	2,324	2,718
Venezuela	3,708	2,165	2,135	2,891	2,854	636
OPEC	22,277	24,835	21,220	27,226	28,818	26,363

Cumulative crude oil production up to and including year

(1,000 b)

	1970	1980	1990	2000	2010	2021
Algeria	2,569,469	6,404,548	8,974,340	11,837,030	16,079,015	20,459,280
Angola	76,423	623,359	1,681,478	3,972,081	8,818,353	15,042,613
Congo	5,406	83,269	503,937	1,277,335	2,185,806	3,270,350
Equatorial Guinea	0	0	0	125,946	1,080,047	1,738,586
Gabon	195,732	870,019	1,507,592	2,691,226	3,586,461	4,436,052
IR Iran	12,357,977	29,969,896	38,410,483	51,367,070	65,152,744	77,922,668
Iraq	7,476,078	15,826,156	22,246,208	26,918,241	34,596,929	49,668,356
Kuwait ¹	13,028,906	21,993,164	25,857,094	32,092,887	40,548,105	51,583,885
Libya	5,476,384	12,810,843	16,929,582	21,993,272	27,594,678	30,753,839
Nigeria	1,138,896	8,389,456	13,656,562	20,572,881	28,198,355	34,903,075
Saudi Arabia ¹	13,283,848	42,306,785	61,814,608	91,266,532	122,387,773	161,654,358
United Arab Emirates	1,160,471	7,164,231	11,921,927	19,785,670	28,265,801	39,740,356
Venezuela	26,301,976	36,046,663	42,528,079	51,772,971	62,363,887	70,379,743
OPEC	83,071,565	182,488,388	246,031,889	335,673,140	440,857,955	561,553,161

Notes:

Prior to 2020, the crude oil production series for Nigeria includes some blended condensate from lease and gas plants.

1. Figures include share of production from Neutral Zone.

Table 3.5
World crude oil production by country

(1,000 b/d)

	2017	2018	2019	2020	2021	% change 21/20
OECD Americas	12,521	14,026	15,275	14,146	14,048	-0.7
Canada	1,213	1,273	1,304	1,199	1,193	-0.5
Chile	3	3	3	1	2	22.8
Mexico	1,948	1,810	1,679	1,663	1,665	0.1
United States	9,357	10,940	12,290	11,283	11,188	-0.8
OECD Europe	2,875	2,862	2,775	2,969	2,902	-2.3
Denmark	137	115	102	71	66	-7.6
Norway	1,588	1,487	1,408	1,691	1,770	4.7
United Kingdom	891	985	1,007	931	791	-15.0
Others	259	276	258	277	276	-0.4
OECD Asia and Pacific	298	311	389	377	357	-5.2
Australia	263	284	361	351	335	-4.7
Others	35	27	28	25	22	-11.6
China	3,821	3,787	3,825	3,889	3,988	2.5
India	720	696	655	616	599	-2.6
Other Asia	2,094	1,997	1,927	1,769	1,650	-6.8
Brunei	101	100	110	101	98	-2.3
Indonesia	710	685	664	631	585	-7.3
Malaysia	648	651	609	540	508	-5.9
Thailand	141	129	126	117	98	-16.6
Vietnam	272	240	222	194	184	-4.8
Others	222	193	197	188	177	-5.7
Latin America	4,730	4,697	4,948	4,967	4,939	-0.6
Argentina	480	489	509	480	513	6.8
Brazil	2,622	2,587	2,788	2,940	2,905	-1.2
Colombia	854	865	886	781	736	-5.7
Ecuador	531	517	531	479	473	-1.4
Guyana	0	0	3	73	109	48.4
Others	244	238	232	213	203	-4.6
Middle East	1,731	1,723	1,689	1,626	1,627	0.1
Bahrain	195	193	194	196	193	-1.4
Oman	884	870	841	762	752	-1.3
Qatar	600	601	595	603	614	1.9
Syrian Arab Republic	21	21	22	23	23	-0.7
Yemen	32	38	37	42	45	6.6
Africa	1,226	1,248	1,252	1,184	1,105	-6.6
Cameroon	76	69	72	73	68	-7.8
Chad	121	128	118	106	96	-10.0
Egypt	531	539	511	487	461	-5.2
Ghana	147	170	198	183	151	-17.5
Sudans	222	223	237	230	221	-4.0
Others	130	118	117	104	109	4.4
Russia	10,207	10,383	10,480	9,460	9,619	1.7
Other Eurasia	2,478	2,560	2,533	2,342	2,334	-0.4
Azerbaijan	729	725	678	611	590	-3.4
Kazakhstan	1,469	1,564	1,587	1,470	1,489	1.3
Others	280	270	267	261	255	-2.5
Other Europe	122	119	119	114	109	-4.5
Total non-OPEC	42,825	44,409	45,867	43,458	43,277	-0.4
OPEC	31,639	31,216	29,377	25,659	26,363	2.7
Algeria	1,059	1,040	1,023	899	911	1.4
Angola	1,632	1,473	1,373	1,271	1,124	-11.6
Congo	263	323	329	300	267	-11.1
Equatorial Guinea	129	120	110	114	93	-17.8
Gabon	210	193	218	207	181	-12.7
IR Iran	3,867	3,536	2,363	1,991	2,392	20.2
Iraq	4,469	4,410	4,576	3,997	3,971	-0.6
Kuwait¹	2,704	2,737	2,678	2,438	2,415	-0.9
Libya	811	946	1,091	389	1,207	210.0
Nigeria	1,536	1,602	1,737	1,493	1,323	-11.4
Saudi Arabia¹	9,959	10,317	9,808	9,213	9,125	-1.0
UAE	2,967	3,008	3,058	2,779	2,718	-2.2
Venezuela	2,035	1,510	1,013	569	636	11.9
Total world	74,464	75,625	75,243	69,118	69,640	0.8
of which						
OPEC percentage	42.5	41.3	39.0	37.1	37.9	2.0
OECD	15,694	17,199	18,438	17,492	17,307	-1.1

Notes:

OPEC Member Countries are not included in the regional totals.

Prior to 2020, the crude oil production series for Nigeria includes some blended condensate from lease and gas plants.

1. Figures include share of production from Neutral Zone.

Table 3.6
Non-OPEC oil supply and OPEC NGLs

(1,000 b/d)

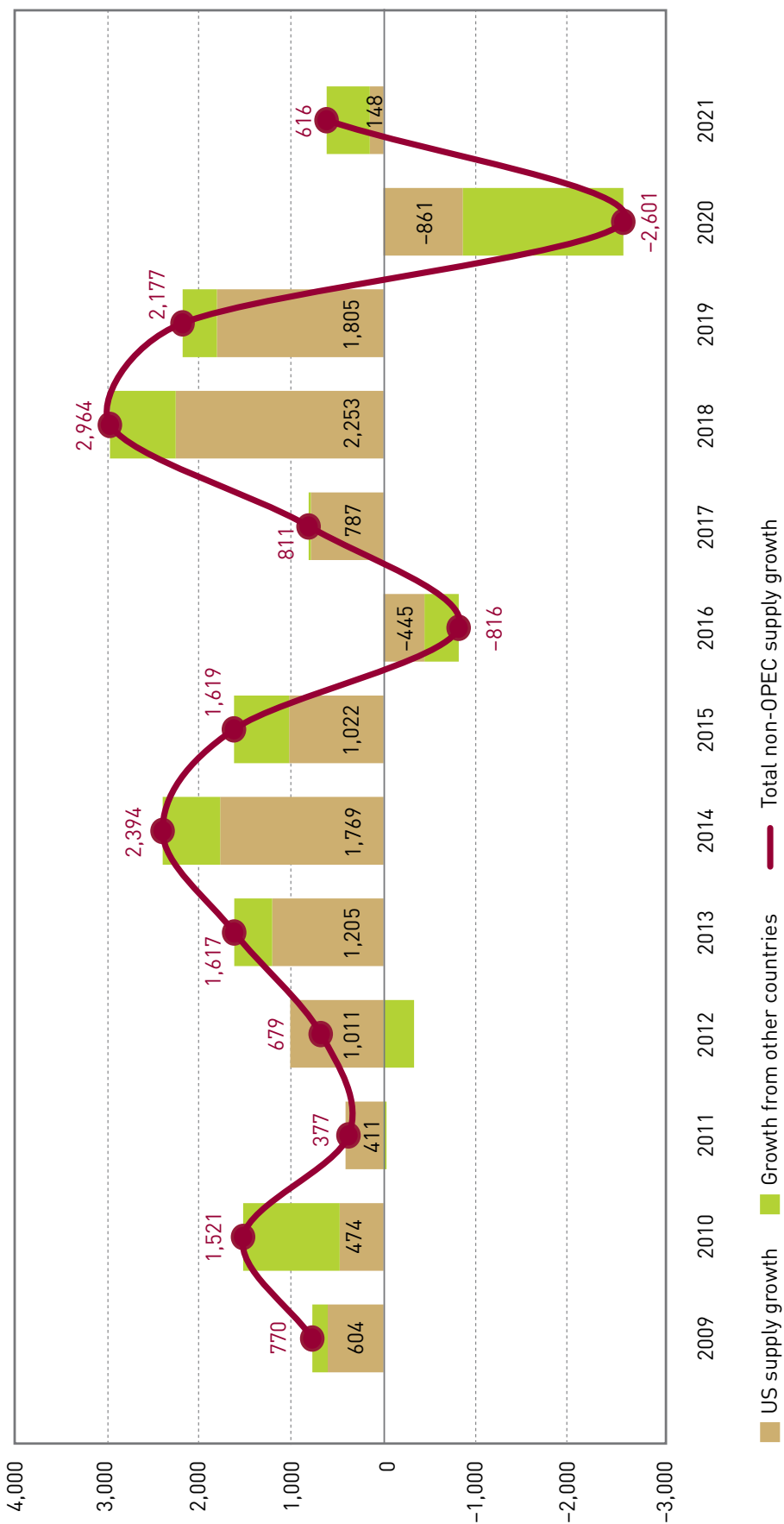
	2017	2018	2019	2020	2021	% change 21/20
OECD Americas	21,497	24,024	25,819	24,714	25,181	1.9
Canada	4,850	5,279	5,413	5,167	5,464	5.8
Chile	6	9	11	9	9	-5.6
Mexico	2,232	2,075	1,928	1,932	1,954	1.2
United States	14,409	16,662	18,467	17,606	17,754	0.8
OECD Europe	3,827	3,838	3,699	3,890	3,758	-3.4
Denmark	143	121	107	78	74	-5.2
Norway	1,969	1,852	1,736	2,001	2,031	1.5
United Kingdom	1,026	1,124	1,146	1,066	908	-14.9
Others	688	742	709	745	745	0.0
OECD Asia and Pacific	386	410	523	523	512	-2.1
Australia	312	341	455	452	441	-2.4
Others	74	68	68	71	71	-0.1
China	3,969	3,985	4,054	4,155	4,308	3.7
India	860	861	824	776	773	-0.4
Other Asia	2,801	2,761	2,725	2,515	2,405	-4.3
Brunei	113	111	121	110	107	-3.4
Indonesia	895	904	917	886	849	-4.2
Malaysia	725	735	694	622	588	-5.4
Thailand	521	517	514	460	443	-3.7
Vietnam	296	270	251	219	212	-3.2
Others	250	223	227	218	207	-4.9
Latin America	5,721	5,790	6,083	6,032	5,954	-1.3
Argentina	670	688	708	654	685	4.8
Brazil	3,252	3,316	3,557	3,673	3,595	-2.1
Colombia	879	891	911	805	762	-5.3
Ecuador	541	526	539	484	478	-1.4
Guyana	0	0	3	73	109	48.4
Others	381	368	365	342	325	-5.0
Middle East	3,139	3,193	3,185	3,193	3,239	1.4
Bahrain	208	208	217	217	209	-3.7
Oman	971	979	971	951	971	2.1
Qatar	1,897	1,933	1,925	1,946	1,978	1.6
Syrian Arab Republic	28	28	28	29	28	-4.0
Yemen	35	45	44	50	53	5.5
Africa	1,481	1,488	1,506	1,415	1,347	-4.8
Cameroon	76	69	72	73	68	-7.8
Chad	121	128	118	106	96	-10.0
Egypt	662	672	655	619	592	-4.3
Ghana	147	170	198	185	157	-15.3
South Africa	119	101	104	92	98	6.8
Sudans	222	223	237	230	221	-4.0
Others	136	124	123	110	115	4.9
Russia	11,326	11,515	11,612	10,592	10,800	2.0
Other Eurasia	3,009	3,081	3,073	2,916	2,934	0.6
Azerbaijan	804	805	789	730	741	1.5
Kazakhstan	1,842	1,925	1,928	1,825	1,835	0.5
Others	363	351	356	361	358	-0.6
Other Europe	126	123	123	118	113	-4.3
Total non-OPEC	58,143	61,069	63,226	60,837	61,323	0.8
Processing gains	2,304	2,343	2,363	2,150	2,281	6.1
Non-OPEC supply	60,447	63,412	65,589	62,988	63,604	1.0
OPEC NGL	5,068	5,192	5,120	5,062	5,185	2.4
OPEC non-conventional (NCF)	98	99	95	104	99	-4.4
OPEC (NGL+NCF)	5,166	5,290	5,215	5,166	5,284	2.3
Non-OPEC & OPEC (NGL+NCF)	65,613	68,702	70,803	68,154	68,888	1.1
<i>of which</i>						
OECD	25,710	28,272	30,041	29,127	29,450	1.1

Table 3.7
World biofuel production

(1,000 b/d)

	2017	2018	2019	2020	2021	% change 21/20
OECD Americas	1,173	1,204	1,183	1,061	1,122	5.8
Canada	38	35	41	37	36	-2.7
United States	1,135	1,169	1,142	1,024	1,086	6.1
OECD Europe	290	305	296	276	270	-2.4
France	55	61	55	43	39	-9.3
Germany	78	78	79	77	74	-3.9
Italy	14	15	15	11	9	-18.2
Netherlands	12	13	15	21	21	-1.4
Poland	21	22	24	23	24	3.2
Spain	27	29	31	27	30	11.0
United Kingdom	18	18	13	13	15	15.4
Others	64	69	64	62	59	-4.9
OECD Asia and Pacific	4	4	4	3	3	2.5
China	65	66	71	72	83	15.3
India	16	31	37	41	61	48.8
Other Asia	135	192	237	244	254	4.1
Indonesia	59	106	145	152	166	9.2
Malaysia	16	21	24	23	23	0.0
Thailand	49	53	56	57	53	-7.0
Others	11	12	12	12	12	0.0
Latin America	619	719	759	712	677	-4.8
Argentina	75	67	61	45	42	-6.7
Brazil	519	622	666	634	599	-5.4
Colombia	17	18	18	17	19	11.8
Others	8	12	14	16	17	6.3
Others	6	6	7	8	6	-25.0
Total world	2,308	2,527	2,593	2,417	2,477	2.5
<i>of which</i>						
OECD	1,467	1,512	1,482	1,341	1,396	4.1

Graph 3.1
The importance of the United States for non-OPEC supply growth in recent years
(1,000 b/d)



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SECTION 4

Oil data: downstream

Table 4.1
Refinery capacity in OPEC Members by company and location

(1,000 b/cd)

	Location	2017	2018	2019	2020	2021
Algeria		651	657	657	677	677
Sonatrach	Skikda	355	355	355	355	355
	Skikda (condensate)	122	122	122	122	122
	Arzew	81	87	87	87	87
	Alger	58	58	58	78	78
	Hassi Messaoud	22	22	22	22	22
	Adrar	13	13	13	13	13
Angola		80	80	80	80	80
Fina Petroleos de Angola	Luanda	65	65	65	65	65
Sonangol	Malongo	15	15	15	15	15
Congo		21	21	21	21	21
Société Nationale des Pétroles du Congo	Pointe Noire	21	21	21	21	21
Equatorial Guinea¹		na	na	na	na	na
Gabon		25	25	25	25	25
Total and Shell	Port Gentil	25	25	25	25	25
IR Iran		1,901	2,141	2,201	2,201	2,202
NIOC	Abadan	399	399	399	399	374
	Isfahan	375	375	375	375	375
	Bandar Abbas	284	284	344	344	344
	Tehran	245	245	245	245	245
	Arak	242	242	242	242	242
	Tabriz	110	110	110	110	110
	Shiraz	56	56	56	56	82
	Kermanshah	22	22	22	22	22
	Lavan	48	48	48	48	48
	Bandar Abbas	120	240	240	240	240
	Qeshm	na	120	120	120	120
Iraq		594	726	813	828	1,116
INOC	Baiji	na	23	38	53	140
	Basrah	210	210	280	280	350
	Daura	140	140	140	140	140
	Kirkuk	30	30	30	30	56
	Sainia	30	30	30	30	30
	Najaf	30	30	30	30	30
	Samawa	30	30	30	30	30
	Nasiria	30	30	30	30	30
	Missan	30	30	30	30	40
	Diwania	20	20	20	20	20
	Haditha	16	16	16	16	16
	Qaiarah	14	14	14	14	14
	Kask	na	5	7	7	20
	Kar	10	80	80	80	160
	Bazyan	4	38	38	38	40
Kuwait		786	736	736	800	800
KNPC	Mina Al-Ahmadi	466	466	466	346	346
	Mina Abdullah	270	270	270	454	454
	Shuaiba	50	na	na	na	na
Libya		634	634	634	634	634
NOC	Ras Lanuf	220	220	220	220	220
	Zawia	120	120	120	120	120
	Tobruk	20	20	20	20	20
	Marsa El-Brega	10	10	10	10	10
	Sarir	10	10	10	10	10
	Zueitina (condensate)	68	68	68	68	68
	Briga (condensate)	155	155	155	155	155
	Mellita (condensate)	31	31	31	31	31

Table 4.1

Refinery capacity in OPEC Members by company and location

(1,000 b/cd)

	Location	2017	2018	2019	2020	2021
Nigeria		446	446	446	461	486
PHRC	Port Harcourt New	150	150	150	150	150
WRPC	Warri	125	125	125	125	125
KRPC	Kaduna	110	110	110	110	110
PHRC	Port Harcourt	60	60	60	60	60
NDPR	Rivers States	1	1	1	1	1
Niger Delta Refining	Ogbele	na	na	na	10	10
Waltersmith Petroman Oil Ltd	Ibigwe	na	na	na	5	5
Edo Refinery and Petrochemicals	Benin	na	na	na	na	6
Omsa, Pillar, Astek (Opac)	Kwale	na	na	na	na	7
Azikel Refinery	Obunagha-Gbarain Bayelsa State	na	na	na	na	12
Saudi Arabia		2,921	2,856	2,896	2,927	3,327
Saudi Aramco	Ras Tanura	550	550	550	550	550
	Yanbu	245	245	245	252	252
	Riyadh	126	126	126	130	130
	Jeddah	65	na	na	na	na
Saudi Aramco & Mobil	Samref	400	400	400	400	400
Saudi Aramco & Petrola	Rabigh	400	400	400	400	400
Saudi Aramco & Total	Satorp	405	405	440	460	460
Saudi Aramco	Yasref	430	430	430	430	430
Saudi Aramco & Shell	Sasref	300	300	305	305	305
Saudi Aramco	Jazan	na	na	na	na	400
United Arab Emirates		1,122	1,122	1,122	1,272	1,272
ADNOC	Al-Ruwais (East and West)	817	817	817	817	817
Emirate Oil	Jebel Ali	140	140	140	210	210
ADNOC	Umm Al-Narr	85	85	85	85	85
VTTI Fujairah Terminals Limited	Fujairah	80	80	80	80	80
FTL FZC – 1						
VTTI Fujairah Terminals Limited	Fujairah	na	na	na	80	80
FTL FZC – 2						
Venezuela		2,276	2,276	2,276	2,276	2,276
PDVSA	Amuay	645	645	645	645	645
	Cardon	310	310	310	310	310
	Puerto La Cruz	187	187	187	187	187
	El Palito	140	140	140	140	140
	San Roque	5	5	5	5	5
	Bajo Grande	16	16	16	16	16
	Petropiar ²	248	248	248	248	248
	Petromonagas ²	158	158	158	158	158
	Petrocedeno ²	284	284	284	284	284
	Petrozuata ²	160	160	160	160	160
	Anzoátegui ²	122	122	122	122.3	122.3
OPEC		11,457	11,720	11,907	12,202	12,915

Notes:

All figures refer to the designated or nameplate refining capacity.

1. Equatorial Guinea does not have refining capacities.

2. Upgrader refinery capacity.

Table 4.2
World refinery capacity by country

(1,000 b/cd)

	2017	2018	2019	2020	2021	change 21/20
OECD Americas	22,417	22,586	22,294	21,631	21,636	5
Canada	1,966	2,046	2,046	2,046	2,046	0
Chile	220	220	220	220	220	0
Mexico	1,615	1,615	1,615	1,615	1,615	0
United States ¹	18,616	18,705	18,413	17,750	17,755	5
OECD Europe	14,403	14,314	14,468	14,453	13,983	-470
Belgium	776	776	776	776	669	-108
France	1,252	1,252	1,252	1,252	1,151	-101
Germany	2,051	2,051	2,051	2,051	2,051	0
Italy	1,900	1,900	1,900	1,900	1,900	0
Netherlands	1,376	1,376	1,342	1,292	1,292	0
Poland	581	581	581	581	581	0
Spain	1,562	1,562	1,562	1,562	1,562	0
Turkey	596	596	784	784	784	0
United Kingdom	1,227	1,238	1,238	1,173	1,173	0
Others	3,081	2,981	2,981	3,081	2,820	-261
OECD Asia and Pacific	7,970	7,970	7,970	7,855	7,620	-235
Australia	462	462	462	462	227	-235
Japan	3,597	3,597	3,597	3,482	3,482	0
New Zealand	136	136	136	136	136	0
South Korea ¹	3,518	3,518	3,518	3,518	3,518	0
Others	257	257	257	257	257	0
China	15,029	15,257	16,059	16,174	16,462	288
India	4,750	4,796	4,796	4,796	4,836	40
Other Asia	6,636	6,836	7,296	7,311	7,110	-202
Indonesia	1,272	1,272	1,272	1,272	1,272	0
Thailand	1,235	1,235	1,235	1,250	1,250	0
Singapore	1,684	1,684	1,684	1,684	1,453	-232
Malaysia	625	625	925	925	955	30
Philippines	276	276	276	276	276	0
Pakistan	368	368	368	368	368	0
Vietnam	167	367	367	367	367	0
Others	1,010	1,010	1,170	1,170	1,170	0
Latin America	6,738	6,618	6,618	6,648	6,648	0
Argentina	631	631	631	661	661	0
Brazil	2,289	2,289	2,289	2,289	2,289	0
Colombia	415	415	415	415	415	0
Ecuador	188	188	188	188	188	0
Venezuela²	2,276	2,276	2,276	2,276	2,276	0
Others	940	820	820	820	820	0
Middle East	8,379	8,677	8,872	9,137	9,839	702
IR Iran¹	1,901	2,141	2,201	2,201	2,202	1
Iraq	594	726	813	828	1,116	288
Kuwait	786	736	736	800	800	0
Qatar¹	430	430	430	430	430	0
Saudi Arabia¹	2,921	2,856	2,896	2,927	3,327	400
United Arab Emirates¹	1,122	1,122	1,122	1,272	1,272	0
Others	625	666	674	679	692	13
Africa	3,559	3,565	3,695	3,730	3,775	45
Algeria¹	651	657	657	677	677	0
Angola	80	80	80	80	80	0
Congo	21	21	21	21	21	0
Egypt	733	733	833	833	833	0
Gabon	25	25	25	25	25	0
Libya	634	634	634	634	634	0
Nigeria	446	446	446	461	486	25
South Africa	520	520	520	520	520	0
Others	450	450	480	480	500	20
Russia	6,810	6,870	7,030	7,030	7,105	75
Other Eurasia	1,510	1,599	1,619	1,619	1,619	0
Azerbaijan	120	120	120	120	120	0
Belarus	505	505	505	505	505	0
Kazakhstan	340	425	425	425	425	0
Turkmenistan	237	237	237	237	237	0
Ukraine	158	158	158	158	158	0
Others	150	154	174	174	174	0
Other Europe	1,079	1,079	1,035	1,035	1,065	30
Bulgaria	195	195	195	195	195	0
Croatia	134	134	90	90	90	0
Romania	256	256	256	256	256	0
Others	494	494	494	494	524	30
Total world	99,281	100,168	101,753	101,420	101,698	278
of which						
OPEC	11,457	11,720	11,907	12,202	12,915	713
OPEC percentage	11.5	11.7	11.7	12.0	12.7	
OECD	44,790	44,870	44,732	43,939	43,239	-700

Notes:

All figures refer to the designated or nameplate refining capacity.

1. Includes condensate splitters.

2. Includes upgrader capacity.

Table 4.3
World refinery throughput by country

(1,000 b/d)

	2017	2018	2019	2020	2021	% change 21/20
OECD Americas	19,820	20,056	20,149	17,599	18,789	6.8
Canada	1,861	1,847	2,252	2,031	2,132	5.0
Chile	225	232	252	205	225	9.9
Mexico	839	666	658	643	779	21.2
United States	16,896	17,311	16,987	14,720	15,652	6.3
OECD Europe	13,444	13,351	13,247	11,680	11,996	2.7
Belgium	713	689	712	553	620	12.1
France	1,257	1,187	1,089	784	747	-4.7
Germany	1,941	1,959	1,937	1,847	1,858	0.6
Italy	1,548	1,490	1,467	1,228	1,357	10.5
Netherlands	1,226	1,235	1,261	1,149	1,206	5.0
Poland	545	551	583	547	538	-1.6
Spain	1,321	1,358	1,315	1,117	1,168	4.6
Turkey	607	546	720	682	729	6.9
United Kingdom	1,160	1,165	1,215	990	1,001	1.1
Others	3,126	3,170	2,948	2,784	2,772	-0.4
OECD Asia and Pacific	7,414	7,402	7,417	6,509	6,405	-1.6
Australia	452	517	500	416	327	-21.5
Japan	3,395	3,273	3,209	2,640	2,616	-0.9
New Zealand	127	125	125	96	92	-4.2
South Korea	3,215	3,248	3,334	3,109	3,120	0.4
Others	225	239	249	248	249	0.3
China	11,330	12,033	13,015	13,484	14,073	4.4
India	4,790	4,891	5,043	4,421	4,725	6.9
Other Asia	5,579	5,637	5,552	5,196	5,243	0.9
Indonesia	1,011	1,042	986	962	927	-3.7
Thailand	1,125	1,132	1,025	998	995	-0.3
Singapore	1,265	1,181	1,175	1,090	1,128	3.5
Malaysia	516	507	587	520	451	-13.1
Philippines	211	237	168	114	84	-26.4
Pakistan	286	261	255	215	282	31.2
Vietnam	149	223	265	289	288	-0.3
Others	1,016	1,054	1,092	1,009	1,087	7.7
Latin America	4,381	4,206	3,989	3,279	3,572	8.9
Argentina	492	467	473	442	466	5.6
Brazil	1,677	1,650	1,678	1,717	1,785	4.0
Colombia	390	397	408	309	283	-8.3
Ecuador	156	170	143	123	127	3.4
Venezuela	956	842	818	345	521	50.9
Others	710	680	470	344	390	13.4
Middle East	7,769	7,811	7,632	6,727	7,528	11.9
IR Iran	1,689	1,705	1,718	1,587	1,691	6.5
Iraq	536	609	639	543	623	14.6
Kuwait	679	681	660	572	686	20.0
Qatar	379	367	345	305	315	3.3
Saudi Arabia	2,601	2,642	2,484	2,173	2,475	13.9
United Arab Emirates	1,091	1,065	1,037	936	1,063	13.5
Others	794	741	749	611	676	10.6
Africa	2,185	2,228	2,182	2,047	2,207	7.8
Algeria	630	644	645	639	643	0.7
Angola	54	55	54	47	40	-14.2
Congo	17	17	17	17	17	3.2
Egypt	506	517	559	600	589	-1.8
Gabon	16	16	14	17	19	13.8
Libya	99	98	83	86	134	56.8
Nigeria	64	38	9	1	5	372.4
South Africa	494	528	503	414	498	20.5
Others	305	316	298	229	262	14.5
Russia	5,592	5,720	5,701	5,387	5,612	4.2
Other Eurasia	1,165	1,293	1,256	1,077	1,239	15.1
Azerbaijan	113	116	130	123	143	15.8
Belarus	367	368	360	328	393	20.0
Kazakhstan	302	411	386	315	349	10.9
Turkmenistan	172	172	172	140	162	15.4
Ukraine	83	90	85	72	74	3.0
Others	128	135	123	98	118	19.8
Other Europe	561	559	547	452	435	-3.7
Bulgaria	136	126	139	108	94	-12.5
Croatia	72	74	54	53	50	-5.4
Romania	231	237	250	211	206	-2.5
Others	122	121	105	80	85	6.4
Total world	84,031	85,187	85,731	77,859	81,824	5.1
of which						
OPEC	8,432	8,412	8,178	6,962	7,916	13.7
OPEC percentage	10.0	9.9	9.5	8.9	9.7	
OECD	40,678	40,809	40,813	35,788	37,190	3.9

Notes:

Includes throughput of crude oil, NGLs, and other hydrocarbons, as well as upgrader intake in some countries.

Table 4.4
Output of petroleum products in OPEC Members

(1,000 b/d)

	2017	2018	2019	2020	2021	% change 21/20
Algeria	609	621	660	614	621	1.1
Gasoline	60	73	83	67	74	10.0
Kerosene	36	32	33	22	19	-14.9
Distillates	169	198	216	205	211	2.7
Residuals	117	106	110	112	104	-7.7
Others	227	211	217	208	214	3.0
Angola	55	55	55	44	40	-10.4
Gasoline	1	1	1	0	0	1.6
Kerosene	12	9	9	6	5	-19.3
Distillates	15	15	15	11	9	-17.4
Residuals	15	17	18	17	16	-6.7
Others	13	13	12	10	9	-3.5
Congo	16	16	16	16	16	3.2
Gasoline	5	5	5	5	5	2.8
Kerosene	2	2	2	1	1	3.1
Distillates	3	3	3	3	3	3.5
Residuals	6	6	6	6	6	3.5
Others	1	1	1	1	1	2.6
Equatorial Guinea	na	na	na	na	na	na
Gabon	14	13	11	16	19	19.7
Gasoline	2	2	2	1	2	39.0
Kerosene	1	1	1	1	2	41.4
Distillates	5	5	4	5	6	13.6
Residuals	6	5	5	7	8	14.0
Others	1	1	1	2	2	27.6
IR Iran	1,680	1,691	1,705	1,577	1,673	6.1
Gasoline	394	398	407	383	405	5.7
Kerosene	119	122	119	67	95	42.0
Distillates	545	551	550	521	547	5.0
Residuals	384	387	385	373	384	2.9
Others	238	233	243	233	242	3.9
Iraq	539	718	747	587	740	26.1
Gasoline	63	84	95	48	44	-6.4
Kerosene	43	47	49	38	40	5.4
Distillates	91	107	118	102	118	16.0
Residuals	294	314	329	279	335	19.8
Others	47	166	156	121	203	68.4
Kuwait	883	891	886	780	845	8.3
Gasoline	36	36	61	51	61	19.5
Kerosene	143	143	136	115	148	29.1
Distillates	170	171	168	181	190	5.1
Residuals	153	154	147	73	90	24.0
Others	381	387	374	361	356	-1.4

Table 4.4
Output of petroleum products in OPEC Members

(1,000 b/d)

	2017	2018	2019	2020	2021	% change 21/20
Libya	93	94	76	80	126	56.6
Gasoline	8	5	3	3	6	88.9
Kerosene	9	6	4	4	7	83.8
Distillates	19	14	10	11	19	67.7
Residuals	22	15	10	11	18	61.6
Others	35	54	49	51	75	48.8
Nigeria	59	33	8	1	5	389.5
Gasoline	20	9	2	0	0	0.0
Kerosene	10	6	1	0	0	1,333.2
Distillates	14	7	2	0	2	277.9
Residuals	11	10	2	0	2	739.3
Others	4	1	0	0	1	245.0
Saudi Arabia	2,630	2,817	2,586	2,177	2,548	17.0
Gasoline	510	545	548	454	544	19.7
Kerosene	228	262	232	145	126	-13.3
Distillates	988	1,073	1,057	985	1,115	13.2
Residuals	426	455	424	345	422	22.5
Others	478	481	325	248	341	37.3
United Arab Emirates	1,043	1,027	1,005	925	1,041	12.5
Gasoline	98	98	96	90	98	8.9
Kerosene	287	289	283	244	293	19.9
Distillates	229	229	227	208	228	9.6
Residuals	49	47	45	41	46	11.6
Others	379	364	354	341	375	10.0
Venezuela	976	804	743	339	270	-20.3
Gasoline	241	200	186	57	57	-0.5
Kerosene	34	26	23	7	9	22.1
Distillates	156	122	115	41	48	17.0
Residuals	296	250	238	123	95	-23.3
Others	250	207	182	109	61	-44.1
OPEC	8,596	8,781	8,499	7,157	7,943	11.0
Gasoline	1,438	1,455	1,489	1,160	1,296	11.8
Kerosene	920	945	892	651	745	14.5
Distillates	2,404	2,495	2,484	2,274	2,497	9.8
Residuals	1,780	1,766	1,719	1,388	1,525	9.9
Others	2,055	2,120	1,915	1,684	1,881	11.7

Notes:

Data may include products from GTLs and condensate units.

Table 4.5

World output of petroleum products by country

(1,000 b/d)

	2017	2018	2019	2020	2021	% change 21/20
OECD Americas	23,369	23,477	23,572	20,330	21,681	6.6
Canada	2,009	1,889	2,230	2,008	2,082	3.7
Chile	216	219	244	193	202	4.7
Mexico	846	677	660	638	754	18.3
United States	20,298	20,693	20,439	17,492	18,642	6.6
OECD Europe	14,314	14,288	14,203	12,497	12,845	2.8
Belgium	731	702	734	579	646	11.7
France	1,304	1,232	1,121	805	769	-4.5
Germany	2,158	2,065	2,076	1,973	1,981	0.4
Italy	1,607	1,549	1,521	1,268	1,401	10.5
Netherlands	1,282	1,302	1,329	1,183	1,256	6.2
Poland	554	592	600	564	556	-1.5
Spain	1,360	1,398	1,356	1,150	1,217	5.9
Turkey	658	589	772	732	784	7.0
United Kingdom	1,290	1,254	1,262	1,025	1,034	0.9
Others	3,371	3,605	3,432	3,217	3,201	-0.5
OECD Asia and Pacific	7,659	7,642	7,634	6,700	6,633	-1.0
Australia	462	520	507	424	337	-20.6
Japan	3,469	3,291	3,279	2,726	2,730	0.1
New Zealand	126	126	126	96	92	-4.0
South Korea	3,302	3,389	3,397	3,130	3,149	0.6
Others	300	316	324	323	324	0.3
China	11,059	11,608	12,501	12,952	13,537	4.5
India	5,426	5,675	5,654	5,120	5,667	10.7
Other Asia	7,433	7,503	7,402	6,936	7,019	1.2
Indonesia	997	1,022	1,024	1,003	966	-3.7
Thailand	1,225	1,250	1,132	1,053	1,094	3.8
Singapore	1,322	1,242	1,236	1,150	1,194	3.9
Malaysia	545	494	574	512	447	-12.6
Philippines	202	228	159	113	93	-18.1
Pakistan	290	288	243	209	273	30.5
Vietnam	130	210	252	277	276	-0.3
Others	2,723	2,770	2,781	2,619	2,676	2.2
Latin America	4,611	4,463	4,374	3,563	3,603	1.1
Argentina	517	511	521	487	520	6.6
Brazil	1,787	1,764	1,787	1,839	1,900	3.3
Colombia	314	318	329	249	231	-7.1
Ecuador	153	167	143	122	128	5.0
Venezuela	976	804	743	339	270	-20.3
Others	865	898	851	528	554	4.9
Middle East	7,895	8,269	8,036	7,045	7,875	11.8
IR Iran	1,680	1,691	1,705	1,577	1,673	6.1
Iraq	539	718	747	587	740	26.1
Kuwait	883	891	886	780	845	8.3
Qatar	363	352	350	312	326	4.2
Saudi Arabia	2,630	2,817	2,586	2,177	2,548	17.0
United Arab Emirates	1,043	1,027	1,005	925	1,041	12.5
Others	758	772	756	686	703	2.4
Africa	2,040	2,006	2,057	1,912	2,038	6.6
Algeria	609	621	660	614	621	1.1
Angola	55	55	55	44	40	-10.4
Congo	16	16	16	16	16	3.2
Egypt	506	519	570	596	587	-1.5
Gabon	14	13	11	16	19	19.7
Libya	93	94	76	80	126	56.6
Nigeria	59	33	8	1	5	389.5
South Africa	442	429	431	326	403	23.6
Others	245	226	230	218	222	1.6
Russia	6,147	6,264	6,257	5,912	6,160	4.2
Other Eurasia	1,721	1,778	1,720	1,561	1,672	7.1
Azerbaijan	108	120	123	114	135	18.6
Belarus	366	368	359	329	390	18.5
Kazakhstan	370	415	428	402	396	-1.4
Turkmenistan	179	179	174	142	163	15.4
Ukraine	75	91	86	73	75	3.0
Others	625	605	550	502	512	2.1
Other Europe	1,263	1,286	1,234	1,078	1,083	0.4
Bulgaria	156	134	149	109	95	-12.9
Croatia	83	85	58	54	52	-5.1
Romania	256	259	274	213	209	-2.1
Others	768	808	752	702	728	3.7
Total world	92,937	94,257	94,644	85,607	89,814	4.9
of which						
OPEC	8,596	8,781	8,499	7,157	7,943	9.3
OPEC percentage	9.2	9.3	9.0	8.4	8.8	
OECD	45,341	45,407	45,408	39,527	41,159	3.6

Notes:

Data may exclude products from GTL and condensate units.

Table 4.6
Oil demand by main petroleum product in OPEC Members

(1,000 b/d)

	2017	2018	2019	2020	2021	% change 21/20
Algeria	422	431	430	383	418	9.1
Gasoline	90	85	85	73	74	2.0
Kerosene	13	13	14	7	7	-0.3
Distillates	218	225	229	201	212	5.5
Residuals	3	3	3	4	4	-4.4
Others	97	105	101	99	122	22.5
Angola	115	121	122	99	100	1.3
Gasoline	19	22	22	21	25	20.5
Kerosene	11	11	10	6	2	-61.2
Distillates	63	63	65	49	48	-2.7
Residuals	3	4	4	3	7	94.0
Others	18	21	22	20	19	-6.4
Congo	8	8	9	7	7	5.7
Gasoline	2	2	2	2	2	7.7
Kerosene	1	1	1	0	0	11.2
Distillates	4	4	4	3	3	6.4
Residuals	0	0	0	0	0	3.0
Others	2	2	2	2	2	1.0
Equatorial Guinea	5	5	5	5	5	0.0
Gasoline	2	2	2	1	2	5.7
Kerosene	1	1	1	1	1	-4.6
Distillates	2	2	2	2	2	-1.1
Residuals	0	0	0	0	0	-
Others	0	0	0	0	0	-10.2
Gabon	47	47	48	42	45	6.0
Gasoline	7	7	7	6	6	4.2
Kerosene	3	3	3	3	3	-8.5
Distillates	34	35	35	29	31	5.9
Residuals	0	0	0	0	0	-
Others	2	2	2	4	5	20.9
IR Iran	1,819	1,854	1,838	1,692	1,777	5.0
Gasoline	582	596	590	550	575	4.6
Kerosene	114	108	98	52	61	17.4
Distillates	491	516	511	472	491	4.0
Residuals	281	260	258	252	255	1.0
Others	351	375	380	366	396	8.1
Iraq	723	704	716	550	621	13.0
Gasoline	125	140	146	119	159	34.0
Kerosene	36	34	41	40	34	-14.8
Distillates	114	138	152	131	145	10.9
Residuals	271	289	253	130	189	44.7
Others	177	103	124	129	94	-27.5

Table 4.6

Oil demand by main petroleum product in OPEC Members

(1,000 b/d)

	2017	2018	2019	2020	2021	% change 21/20
Kuwait	401	417	460	461	482	4.4
Gasoline	61	61	79	61	75	22.5
Kerosene	14	15	23	11	12	9.5
Distillates	51	53	55	48	56	15.3
Residuals	109	114	103	60	103	72.0
Others	166	175	200	281	236	-16.0
Libya	208	215	214	183	186	2.1
Gasoline	78	81	83	91	91	0.5
Kerosene	5	5	4	3	3	3.3
Distillates	88	92	94	61	63	2.9
Residuals	26	27	22	18	19	5.4
Others	11	11	11	10	11	5.2
Nigeria	426	446	470	466	495	6.2
Gasoline	316	337	355	350	389	11.3
Kerosene	26	24	23	15	17	13.8
Distillates	82	79	89	94	81	-14.7
Residuals	2	3	1	1	2	54.1
Others	1	2	2	6	6	6.5
Saudi Arabia	3,272	3,105	3,139	2,927	2,966	1.3
Gasoline	599	561	550	455	480	5.5
Kerosene	101	104	103	44	47	8.8
Distillates	591	522	528	492	503	2.3
Residuals	516	503	540	600	568	-5.2
Others	1,465	1,415	1,419	1,338	1,367	2.2
United Arab Emirates	819	885	899	828	916	10.6
Gasoline	185	211	215	200	220	9.9
Kerosene	157	166	168	142	166	16.3
Distillates	102	123	129	115	130	12.9
Residuals	330	335	329	323	340	5.2
Others	45	50	58	47	60	28.2
Venezuela	503	403	367	188	232	23.0
Gasoline	195	170	155	61	65	5.4
Kerosene	8	7	6	3	3	3.6
Distillates	127	118	113	39	43	10.1
Residuals	18	17	47	56	65	15.2
Others	155	92	47	29	56	95.5
OPEC	8,768	8,642	8,717	7,831	8,249	5.3
Gasoline	2,260	2,274	2,290	1,990	2,164	8.7
Kerosene	491	493	495	326	355	9.0
Distillates	1,967	1,970	2,005	1,737	1,807	4.0
Residuals	1,561	1,554	1,559	1,448	1,551	7.1
Others	2,489	2,352	2,368	2,330	2,372	1.8

Table 4.7
World oil demand by country

(1,000 b/d)

	2017	2018	2019	2020	2021	% change 21/20
OECD America	24,882	25,411	25,532	22,555	24,275	7.6
Canada	2,463	2,520	2,629	2,303	2,353	2.2
Chile	357	363	362	324	355	9.8
Mexico	2,019	1,932	1,958	1,581	1,641	3.8
United States	20,042	20,596	20,583	18,348	19,926	8.6
OECD Europe	14,411	14,307	14,314	12,433	13,082	5.2
Belgium	638	684	642	565	636	12.4
France	1,737	1,686	1,688	1,421	1,541	8.5
Germany	2,450	2,326	2,346	2,149	2,136	-0.6
Italy	1,245	1,272	1,255	1,050	1,176	12.0
Netherlands	943	929	916	858	803	-6.4
Poland	658	680	698	662	702	5.9
Spain	1,297	1,332	1,328	1,088	1,189	9.3
Turkey	991	958	987	923	982	6.4
United Kingdom	1,619	1,605	1,578	1,215	1,274	4.8
Others	2,834	2,835	2,874	2,500	2,643	5.7
OECD Asia Pacific	8,156	8,012	7,934	7,139	7,409	3.8
Australia	1,167	1,185	1,178	1,022	1,044	2.2
Japan	3,945	3,850	3,739	3,326	3,416	2.7
New Zealand	177	179	184	152	147	-3.0
South Korea	2,630	2,566	2,599	2,437	2,586	6.1
Others	238	231	234	203	215	6.1
China	12,738	13,156	13,707	13,860	14,938	7.8
India	4,696	4,934	4,994	4,510	4,772	5.8
Other Asia	8,692	8,907	9,060	8,131	8,627	6.1
Indonesia	1,715	1,773	1,856	1,622	1,776	9.4
Malaysia	759	783	786	680	772	13.6
Pakistan	500	469	470	425	469	10.4
Philippines	389	426	449	378	454	20.1
Singapore	1,374	1,374	1,410	1,339	1,376	2.7
Thailand	1,409	1,443	1,456	1,330	1,317	-1.0
Vietnam	419	439	454	407	431	5.7
Others	2,127	2,200	2,179	1,949	2,032	4.2
Latin America	6,506	6,527	6,594	5,900	6,225	5.5
Argentina	736	722	709	597	683	14.3
Brazil	3,104	3,162	3,236	3,071	3,207	4.4
Colombia	331	336	348	292	321	9.9
Ecuador	241	260	271	225	235	4.5
Venezuela	503	403	367	188	232	23.0
Others	1,592	1,644	1,664	1,527	1,548	1.4
Middle East	8,231	8,128	8,201	7,445	7,793	4.7
IR Iran	1,819	1,854	1,838	1,692	1,777	5.0
Iraq	723	704	716	550	621	13.0
Kuwait	401	417	460	461	482	4.4
Qatar	339	330	342	292	321	9.7
Saudi Arabia	3,272	3,105	3,139	2,927	2,966	1.3
Syria	157	137	127	123	124	1.0
United Arab Emirates	819	885	899	828	916	10.6
Others	700	695	680	572	587	2.6
Africa	4,194	4,325	4,338	4,053	4,224	4.2
Algeria	422	431	430	383	418	9.1
Angola	115	121	122	99	100	1.3
Congo	8	8	9	7	7	5.7
Egypt	855	794	737	735	786	7.0
Equatorial Guinea	5	5	5	5	5	0.0
Gabon	47	47	48	42	45	6.0
Libya	208	215	214	183	186	2.1
Nigeria	426	446	470	466	495	6.2
South Africa	668	671	654	595	622	4.5
Tunisia	99	109	113	87	85	-2.8
Others	1,342	1,477	1,537	1,452	1,476	1.6
Russia	3,477	3,549	3,568	3,387	3,613	6.7
Other Eurasia	1,166	1,207	1,192	1,074	1,211	12.7
Azerbaijan	99	99	101	103	107	4.6
Belarus	134	167	156	158	160	1.4
Kazakhstan	270	270	271	290	294	1.2
Turkmenistan	134	132	141	145	151	3.8
Ukraine	272	280	286	231	250	8.1
Others	256	260	237	147	248	69.3
Other Europe	718	743	764	697	754	8.3
Bulgaria	114	120	124	118	128	9.1
Croatia	106	109	113	106	117	10.5
Romania	195	197	202	188	202	7.3
Serbia	94	97	104	93	101	8.8
Others	210	219	221	192	206	7.2
Total world	97,867	99,204	100,200	91,185	96,922	6.3
of which						
OPEC	8,768	8,642	8,717	7,831	8,249	5.3
OPEC percentage	9.0	8.7	8.7	8.6	8.5	
OECD	47,449	47,730	47,780	42,127	44,765	6.3

Table 4.8

World oil demand by main petroleum product and region

(1,000 b/d)

	2017	2018	2019	2020	2021	% change 21/20
OECD Americas	24,882	25,411	25,532	22,555	24,275	7.6
Gasoline	11,083	11,092	11,078	9,590	10,378	8.2
Kerosene	1,963	2,010	2,038	1,233	1,552	25.9
Distillates	5,158	5,367	5,352	4,930	5,077	3.0
Residuals	623	557	520	398	534	34.2
Others	6,055	6,385	6,544	6,404	6,734	5.1
OECD Europe	14,411	14,307	14,314	12,433	13,082	5.2
Gasoline	1,915	1,996	2,035	1,754	1,924	9.7
Kerosene	1,461	1,526	1,556	733	837	14.2
Distillates	6,484	6,444	6,458	5,961	6,260	5.0
Residuals	891	874	839	679	705	3.8
Others	3,660	3,467	3,426	3,306	3,356	1.5
OECD Asia Pacific	8,156	8,012	7,934	7,139	7,409	3.8
Gasoline	1,559	1,541	1,515	1,354	1,363	0.7
Kerosene	931	923	889	607	607	0.0
Distillates	1,901	1,900	1,929	1,791	1,832	2.3
Residuals	538	518	429	427	460	7.7
Others	3,227	3,130	3,172	2,960	3,147	6.3
China	12,738	13,156	13,707	13,860	14,938	7.8
Gasoline	3,077	3,126	3,245	3,162	3,477	10.0
Kerosene	691	731	889	673	715	6.2
Distillates	3,470	3,544	3,432	3,376	3,501	3.7
Residuals	391	421	510	537	622	15.8
Others	5,108	5,334	5,630	6,111	6,623	8.4
India	4,696	4,934	4,994	4,510	4,772	5.8
Gasoline	623	662	699	635	715	12.6
Kerosene	247	263	237	139	155	11.5
Distillates	1,662	1,704	1,732	1,494	1,595	6.8
Residuals	151	167	150	139	146	5.0
Others	2,012	2,138	2,176	2,103	2,160	2.7
Other Asia	8,692	8,907	9,060	8,131	8,627	6.1
Gasoline	1,772	1,860	1,915	1,808	1,933	6.9
Kerosene	744	779	813	486	480	-1.2
Distillates	2,114	2,157	2,169	2,068	2,328	12.6
Residuals	1,208	1,185	1,150	1,090	1,104	1.3
Others	2,852	2,926	3,013	2,680	2,781	3.8
Latin America	6,506	6,527	6,594	5,900	6,225	5.5
Gasoline	1,924	1,904	1,911	1,701	1,793	5.4
Kerosene	303	313	323	195	220	13.0
Distillates	2,089	2,070	2,082	1,900	2,021	6.4
Residuals	605	610	605	533	557	4.5
Others	1,585	1,629	1,672	1,572	1,634	3.9
Middle East	8,231	8,128	8,201	7,445	7,793	4.7
Gasoline	1,677	1,686	1,669	1,444	1,592	10.2
Kerosene	455	465	474	308	366	18.8
Distillates	1,773	1,763	1,780	1,628	1,709	5.0
Residuals	1,533	1,526	1,503	1,396	1,417	1.5
Others	2,793	2,688	2,775	2,670	2,710	1.5

Table 4.8

World oil demand by main petroleum product and region

(1,000 b/d)

	2017	2018	2019	2020	2021	% change 21/20
Africa	4,194	4,325	4,338	4,053	4,224	4.2
Gasoline	1,112	1,156	1,179	1,105	1,169	5.8
Kerosene	311	316	333	235	257	9.4
Distillates	1,683	1,719	1,762	1,643	1,700	3.5
Residuals	449	439	431	396	378	-4.4
Others	639	694	633	674	719	6.7
Russia	3,477	3,549	3,568	3,387	3,613	6.7
Gasoline	922	918	895	881	912	3.5
Kerosene	261	260	227	143	205	43.8
Distillates	776	720	863	833	930	11.7
Residuals	151	135	152	143	164	14.2
Others	1,366	1,515	1,432	1,387	1,402	1.1
Other Eurasia	1,166	1,207	1,192	1,074	1,211	12.7
Gasoline	290	274	235	210	234	11.5
Kerosene	77	90	94	42	60	44.2
Distillates	483	494	527	508	570	12.2
Residuals	229	255	298	283	299	5.8
Others	88	94	39	32	47	47.7
Other Europe	718	743	764	697	754	8.3
Gasoline	133	146	166	140	167	19.3
Kerosene	23	24	26	5	12	140.0
Distillates	330	340	352	348	353	1.4
Residuals	50	45	40	39	34	-12.8
Others	181	188	180	164	188	14.4
Total world	97,867	99,204	100,200	91,185	96,922	6.3
Gasoline	26,087	26,362	26,543	23,784	25,658	7.9
Kerosene	7,469	7,700	7,898	4,798	5,467	13.9
Distillates	27,924	28,222	28,438	26,480	27,877	5.3
Residuals	6,820	6,733	6,627	6,059	6,420	6.0
Others	29,567	30,188	30,693	30,064	31,500	4.8
<i>of which</i>						
OPEC	8,768	8,642	8,717	7,831	8,249	5.3
Gasoline	2,260	2,274	2,290	1,990	2,164	8.7
Kerosene	491	493	495	326	355	9.0
Distillates	1,967	1,970	2,005	1,737	1,807	4.0
Residuals	1,561	1,554	1,559	1,448	1,551	7.1
Others	2,489	2,352	2,368	2,330	2,372	1.8
OECD	47,449	47,730	47,780	42,127	44,765	6.3
Gasoline	14,557	14,629	14,628	12,698	13,665	7.6
Kerosene	4,355	4,459	4,483	2,573	2,996	16.4
Distillates	13,543	13,711	13,739	12,682	13,169	3.8
Residuals	2,052	1,949	1,788	1,504	1,699	13.0
Others	12,942	12,982	13,142	12,670	13,236	4.5

Graph 4.1
World refinery throughput by region

(y-o-y change; mb/d)



SECTION 5

Oil trade

Table 5.1
OPEC Members' crude oil exports by destination

(1,000 b/d)

	Destination	2017	2018	2019	2020	2021
Algeria		633	571	584	439	446
<i>of which</i>	OECD Americas	74	65	16	24	17
	OECD Europe	354	346	360	286	308
	OECD Asia Pacific	41	37	43	30	27
	China	6	8	9	8	0
	India	38	38	54	27	11
	Other Asia	38	33	32	37	46
	Latin America	47	40	44	19	33
	Middle East	0	0	23	0	0
	Africa	31	2	0	0	0
	Russia	0	0	0	0	0
	Other Eurasia	0	0	0	0	2
	Other Europe	3	1	4	7	1
Angola		1,577	1,421	1,319	1,220	1,080
<i>of which</i>	OECD Americas	104	70	43	34	52
	OECD Europe	105	134	164	109	44
	OECD Asia Pacific	18	13	13	8	5
	China	971	928	892	867	772
	India	132	125	119	72	76
	Other Asia	137	75	52	105	86
	Latin America	36	17	17	11	13
	Middle East	0	16	3	3	10
	Africa	72	42	15	13	18
	Russia	0	0	0	0	0
	Other Eurasia	0	0	0	0	0
	Other Europe	0	0	0	0	3
Congo		261	307	309	282	251
<i>of which</i>	OECD Americas	5	13	15	5	0
	OECD Europe	15	5	18	25	10
	OECD Asia Pacific	12	16	5	5	24
	China	178	238	231	182	166
	India	2	6	20	15	25
	Other Asia	43	27	17	26	18
	Latin America	0	0	3	5	3
	Middle East	6	3	0	8	5
	Africa	0	0	0	10	0
	Russia	0	0	0	0	0
	Other Eurasia	0	0	0	0	0
	Other Europe	0	0	0	0	0
Equatorial Guinea		125	121	110	115	93
<i>of which</i>	OECD Americas	7	15	15	0	0
	OECD Europe	57	45	37	29	41
	OECD Asia Pacific	0	0	0	4	0
	China	46	45	30	53	21
	India	14	11	22	20	27
	Other Asia	0	0	6	8	5
	Latin America	0	6	0	0	0
	Middle East	0	0	0	0	0
	Africa	0	0	0	0	0
	Russia	0	0	0	0	0
	Other Eurasia	0	0	0	0	0
	Other Europe	0	0	0	0	0
Gabon		188	174	207	196	181
<i>of which</i>	OECD Americas	6	6	0	0	0
	OECD Europe	17	10	17	38	21
	OECD Asia Pacific	25	30	19	15	29
	China	77	73	141	117	57
	India	9	15	0	7	34
	Other Asia	36	25	29	20	40
	Latin America	18	14	0	0	0
	Middle East	0	0	0	0	0
	Africa	0	1	1	0	0
	Russia	0	0	0	0	0
	Other Eurasia	0	0	0	0	0
	Other Europe	0	0	0	0	0
IR Iran		2,125	1,850	651	404	763
<i>of which</i>	OECD Americas	0	0	0	0	3
	OECD Europe	743	443	60	4	1
	OECD Asia Pacific	362	272	136	0	0
	China	515	585	298	78	230
	India	470	531	94	0	0
	Other Asia	23	19	64	317	435
	Latin America	0	0	0	0	26
	Middle East	0	0	0	6	68
	Africa	0	0	0	0	0
	Russia	0	0	0	0	0
	Other Eurasia	0	0	0	0	0
	Other Europe	12	0	0	0	0
Iraq		3,802	3,862	3,968	3,428	3,440
<i>of which</i>	OECD Americas	598	503	300	139	178
	OECD Europe	975	870	1,052	756	844
	OECD Asia Pacific	399	432	362	242	166
	China	741	901	1,039	1,137	949
	India	844	954	988	902	1,005
	Other Asia	146	132	119	84	93
	Latin America	27	29	8	6	16
	Middle East	41	0	36	22	35
	Africa	17	18	46	65	74
	Russia	0	0	0	0	0
	Other Eurasia	0	0	0	0	0
	Other Europe	12	23	20	75	81

Table 5.1
OPEC Members' crude oil exports by destination

(1,000 b/d)

	Destination	2017	2018	2019	2020	2021
Kuwait		2,010	2,050	1,986	1,826	1,740
<i>of which</i>	OECD Americas	254	206	153	0	0
	OECD Europe	137	39	16	32	0
	OECD Asia Pacific	667	668	662	552	511
	China	366	466	454	538	607
	India	223	229	214	184	221
	Other Asia	324	387	419	429	354
	Latin America	0	0	0	0	0
	Middle East	0	0	0	0	0
	Africa	39	56	68	86	47
	Russia	0	0	0	0	0
	Other Eurasia	0	0	0	0	0
	Other Europe	0	0	0	5	0
Libya		792	999	1,036	347	1,091
<i>of which</i>	OECD Americas	56	56	64	3	89
	OECD Europe	624	662	678	241	799
	OECD Asia Pacific	33	29	31	7	13
	China	52	171	188	73	124
	India	0	5	3	4	10
	Other Asia	13	64	52	14	42
	Latin America	0	3	4	0	2
	Middle East	0	0	0	0	5
	Africa	2	1	5	0	0
	Russia	0	0	0	0	0
	Other Eurasia	0	0	0	0	4
	Other Europe	11	7	11	5	5
Nigeria		1,811	1,979	2,008	1,879	1,592
<i>of which</i>	OECD Americas	331	172	28	90	170
	OECD Europe	693	1,056	439	812	664
	OECD Asia Pacific	18	40	238	38	22
	China	16	9	0	81	34
	India	365	327	0	296	299
	Other Asia	114	11	427	221	173
	Latin America	50	52	252	21	50
	Middle East	3	0	122	9	8
	Africa	222	310	261	310	168
	Russia	0	0	0	0	0
	Other Eurasia	0	0	164	0	0
	Other Europe	0	3	78	0	3
Saudi Arabia		6,968	7,372	7,038	6,659	6,227
<i>of which</i>	OECD Americas	1,003	1,020	561	549	422
	OECD Europe	772	869	797	756	517
	OECD Asia Pacific	2,151	2,026	1,866	1,855	1,754
	China	1,048	1,139	1,671	1,701	1,758
	India	719	788	852	751	707
	Other Asia	879	1,029	781	582	580
	Latin America	71	70	67	52	84
	Middle East	155	267	266	212	209
	Africa	164	164	177	202	196
	Russia	0	0	0	0	0
	Other Eurasia	0	0	0	0	0
	Other Europe	6	0	0	0	0
United Arab Emirates		2,379	2,296	2,414	2,418	2,305
<i>of which</i>	OECD Americas	13	5	3	1	10
	OECD Europe	0	0	0	3	17
	OECD Asia Pacific	1,139	1,091	1,248	1,089	1,349
	China	168	252	242	528	419
	India	308	327	414	448	331
	Other Asia	730	598	464	248	167
	Latin America	0	0	0	1	0
	Middle East	8	0	0	0	0
	Africa	12	24	43	101	12
	Russia	0	0	0	0	0
	Other Eurasia	0	0	0	0	0
	Other Europe	0	0	0	0	0
Venezuela		1,596	1,273	847	487	448
<i>of which</i>	OECD Americas	546	494	28	0	0
	OECD Europe	65	49	98	39	0
	OECD Asia Pacific	8	0	0	0	0
	China	331	277	246	14	102
	India	291	289	338	110	0
	Other Asia	14	27	82	281	317
	Latin America	342	134	46	31	26
	Middle East	0	3	7	0	3
	Africa	0	0	1	11	0
	Russia	0	0	0	0	0
	Other Eurasia	0	0	0	2	0
	Other Europe	0	0	0	0	0
OPEC		24,267	24,274	22,478	19,701	19,656
<i>of which</i>	OECD Americas	3,000	2,625	1,225	844	941
	OECD Europe	4,558	4,527	3,735	3,131	3,267
	OECD Asia Pacific	4,873	4,653	4,622	3,845	3,900
	China	4,515	5,092	5,442	5,377	5,240
	India	3,416	3,646	3,118	2,834	2,745
	Other Asia	2,497	2,426	2,544	2,371	2,355
	Latin America	591	366	441	145	253
	Middle East	213	288	457	259	343
	Africa	560	619	616	799	516
	Russia	0	0	0	0	0
	Other Eurasia	0	0	164	2	5
	Other Europe	44	33	112	93	92

Notes:

Data may include lease condensates and volumes of oil in transit.

Table 5.2
World crude oil exports by country

(1,000 b/d)

	2017	2018	2019	2020	2021	% change 21/20
OECD Americas	5,315	6,509	7,539	7,551	7,266	-3.8
Canada	2,893	3,178	3,357	3,146	3,195	1.6
Mexico	1,264	1,283	1,200	1,199	1,091	-8.9
United States	1,158	2,048	2,982	3,206	2,980	-7.0
Others	0	0	0	1	0	-100.0
OECD Europe	2,195	2,168	2,144	2,277	2,232	-1.9
Norway	1,361	1,254	1,234	1,502	1,563	4.1
United Kingdom	693	818	834	726	604	-16.9
Others	141	95	77	48	65	34.5
OECD Asia Pacific	206	236	271	271	267	-1.5
Australia	180	215	249	253	254	0.3
Others	26	22	22	18	13	-26.3
China	97	52	16	33	53	61.0
India	0	0	0	0	0	0.0
Other Asia	952	839	647	614	551	-10.3
Brunei	98	92	107	88	69	-21.9
Indonesia	285	206	74	92	117	27.8
Malaysia	345	358	287	280	209	-25.3
Vietnam	129	88	85	75	68	-8.9
Others	95	95	94	79	87	10.4
Latin America	3,822	3,469	3,290	3,021	2,803	-7.2
Brazil	1,127	1,147	1,301	1,401	1,292	-7.8
Colombia	642	590	612	541	442	-18.3
Ecuador	380	367	398	365	349	-4.4
Trinidad & Tobago	31	30	53	52	59	12.9
Venezuela	1,596	1,273	847	487	448	-8.0
Others	45	61	81	175	212	21.4
Middle East	18,757	18,917	17,590	16,264	16,041	-1.4
Bahrain	155	157	156	151	152	0.6
IR Iran	2,125	1,850	651	404	763	88.6
Iraq	3,802	3,862	3,968	3,428	3,440	0.3
Kuwait	2,010	2,050	1,986	1,826	1,740	-4.7
Oman	803	808	839	860	897	4.3
Qatar	466	477	485	464	458	-1.3
Saudi Arabia	6,968	7,372	7,038	6,659	6,227	-6.5
United Arab Emirates	2,379	2,296	2,414	2,418	2,305	-4.7
Others	49	46	53	53	59	12.1
Africa	6,226	6,436	6,454	5,372	5,617	4.6
Algeria	633	571	584	439	446	1.7
Angola	1,577	1,421	1,319	1,220	1,080	-11.5
Congo	261	307	309	282	251	-11.2
Egypt	139	115	90	103	110	7.1
Equatorial Guinea	125	121	110	115	93	-18.9
Gabon	188	174	207	196	181	-7.6
Libya	792	999	1,036	347	1,091	214.2
Nigeria	1,811	1,979	2,008	1,879	1,592	-15.3
Sudans	99	115	138	135	138	1.5
Others	602	634	652	656	636	-3.1
Russia	5,058	5,207	5,241	4,617	4,510	-2.3
Other Eurasia	2,061	2,080	2,041	1,994	1,877	-5.9
Azerbaijan	615	609	559	500	483	-3.5
Kazakhstan	1,371	1,401	1,411	1,417	1,323	-6.6
Others	75	70	70	77	71	-7.6
Other Europe	11	12	16	14	11	-21.0
Total world	44,699	45,925	45,250	42,027	41,228	-1.9
<i>of which</i>						
OPEC	24,267	24,274	22,478	19,701	19,656	-0.2
<i>OPEC percentage</i>	<i>54.3</i>	<i>52.9</i>	<i>49.7</i>	<i>46.9</i>	<i>47.7</i>	
OECD	7,716	8,913	9,954	10,099	9,766	-3.3

Notes:

Data may include lease condensates and volumes of oil in transit.

Table 5.3

World exports of petroleum products by country

(1,000 b/d)

	2017	2018	2019	2020	2021	% change 21/20
OECD Americas	5,873	6,142	6,112	5,869	6,311	7.5
Canada	491	444	500	423	473	11.6
Mexico	156	141	115	139	170	22.7
United States	5,218	5,553	5,490	5,292	5,652	6.8
Others	7	4	6	15	16	8.4
OECD Europe	7,886	7,651	7,312	6,459	7,026	8.8
Belgium	624	622	608	502	542	7.9
France	435	424	367	278	278	-0.1
Germany	483	461	449	454	521	14.6
Italy	636	579	557	462	531	15.1
Netherlands	2,333	2,306	2,247	1,918	2,258	17.7
Norway	433	416	428	388	379	-2.2
Spain	471	453	420	398	389	-2.3
Sweden	350	347	230	201	250	24.9
United Kingdom	506	483	451	395	392	-0.8
Others	1,616	1,561	1,555	1,463	1,486	1.6
OECD Asia Pacific	2,113	2,171	2,249	1,883	1,800	-4.4
Japan	575	548	609	385	401	4.1
South Korea	1,367	1,432	1,409	1,259	1,206	-4.2
Others	171	191	231	239	193	-19.2
China	1,169	1,276	1,460	1,324	1,289	-2.6
India	1,411	1,344	1,360	1,216	1,283	5.5
Other Asia	3,317	3,065	2,834	2,768	2,892	4.5
Indonesia	80	70	77	87	84	-3.8
Malaysia	632	663	646	775	877	13.2
Singapore	2,088	1,777	1,622	1,440	1,426	-1.0
Others	517	556	489	466	505	8.3
Latin America	982	1,057	885	821	801	-2.5
Brazil	133	171	217	284	246	-13.5
Ecuador	42	42	39	34	37	8.7
Trinidad & Tobago	118	119	15	12	10	-18.3
Venezuela	230	226	97	70	67	-3.3
Others	458	499	517	421	441	4.7
Middle East	3,980	4,701	4,082	3,558	4,069	14.3
Bahrain	242	239	250	214	218	1.9
IR Iran	270	272	285	281	333	18.7
Iraq	20	46	107	151	158	4.7
Kuwait	640	630	637	527	604	14.5
Qatar	639	552	538	460	431	-6.2
Saudi Arabia	1,438	1,971	1,300	1,017	1,344	32.2
United Arab Emirates	654	916	882	840	891	6.1
Others	77	75	84	70	90	28.9
Africa	845	845	858	908	926	2.0
Algeria	570	532	506	503	493	-2.0
Angola	17	18	17	16	29	79.3
Congo	6	6	6	4	4	1.1
Egypt	44	73	126	166	134	-19.0
Equatorial Guinea	0	0	0	0	0	0.0
Gabon	12	9	8	9	10	13.2
Libya	23	25	21	66	89	35.9
Nigeria	19	21	20	0	11	100.0
Others	153	160	155	144	155	8.0
Russia	2,479	2,510	2,554	2,417	2,385	-1.3
Other Eurasia	547	462	464	447	423	-5.5
Azerbaijan	26	27	28	28	38	32.3
Kazakhstan	147	129	122	114	107	-6.3
Others	375	306	314	305	278	-8.8
Other Europe	217	216	231	197	165	-16.1
Romania	96	102	101	91	82	-10.4
Others	121	114	130	106	84	-20.9
Total world	30,819	31,440	30,400	27,867	29,370	5.4
<i>of which</i>						
OPEC	3,899	4,673	3,885	3,483	4,034	15.8
<i>OPEC percentage</i>	<i>12.7</i>	<i>14.9</i>	<i>12.8</i>	<i>12.5</i>	<i>13.7</i>	
OECD	15,872	15,964	15,673	14,211	15,137	6.5

Notes:

Data may include re-exports and volumes of oil in transit.

Table 5.4

World exports of petroleum products by main petroleum product and region

(1,000 b/d)

	2017	2018	2019	2020	2021	% change 21/20
OECD Americas	5,873	6,142	6,112	5,869	6,311	7.5
Gasoline	1,067	1,165	1,133	1,034	1,226	18.6
Kerosene	240	279	289	134	163	21.9
Distillates	1,826	1,707	1,799	1,728	1,638	-5.2
Residuals	636	665	458	377	416	10.3
Others	2,104	2,327	2,433	2,596	2,868	10.5
OECD Europe	7,886	7,651	7,312	6,459	7,026	8.8
Gasoline	1,811	1,797	1,811	1,501	1,678	11.8
Kerosene	390	426	431	310	305	-1.6
Distillates	2,365	2,105	2,063	2,004	2,143	6.9
Residuals	1,369	1,231	1,048	1,092	1,308	19.8
Others	1,952	2,093	1,960	1,551	1,592	2.7
OECD Asia Pacific	2,113	2,171	2,249	1,883	1,800	-4.4
Gasoline	310	321	326	262	351	34.0
Kerosene	440	430	448	310	255	-17.8
Distillates	808	820	909	786	745	-5.3
Residuals	176	220	169	152	120	-21.2
Others	380	381	397	373	330	-11.5
China	1,169	1,276	1,460	1,324	1,289	-2.6
Gasoline	246	299	380	372	340	-8.5
Kerosene	281	312	375	213	182	-14.4
Distillates	342	366	424	391	342	-12.4
Residuals	202	219	203	286	356	24.3
Others	98	80	79	62	68	9.8
India	1,411	1,344	1,360	1,216	1,283	5.5
Gasoline	332	310	301	268	294	9.8
Kerosene	149	161	155	86	104	20.3
Distillates	574	566	605	604	624	3.4
Residuals	43	40	32	17	32	90.7
Others	314	268	267	242	229	-5.2
Other Asia	3,317	3,065	2,834	2,768	2,892	4.5
Gasoline	771	723	733	597	707	18.4
Kerosene	254	198	187	172	171	-0.7
Distillates	972	1,006	867	880	872	-0.9
Residuals	865	717	634	547	608	11.3
Others	456	421	412	573	534	-6.9
Latin America	982	1,057	885	821	801	-2.5
Gasoline	153	164	150	111	132	19.1
Kerosene	66	56	48	46	55	18.3
Distillates	71	72	22	28	13	-53.6
Residuals	459	515	427	493	573	16.2
Others	232	249	237	143	28	-80.4
Middle East	3,980	4,701	4,082	3,558	4,069	14.3
Gasoline	245	411	224	208	295	41.6
Kerosene	422	487	409	366	459	25.2
Distillates	954	1,285	1,064	896	1,110	23.8
Residuals	498	588	524	415	496	19.6
Others	1,861	1,929	1,861	1,673	1,709	2.2

Table 5.4

World exports of petroleum products by main petroleum product and region

(1,000 b/d)

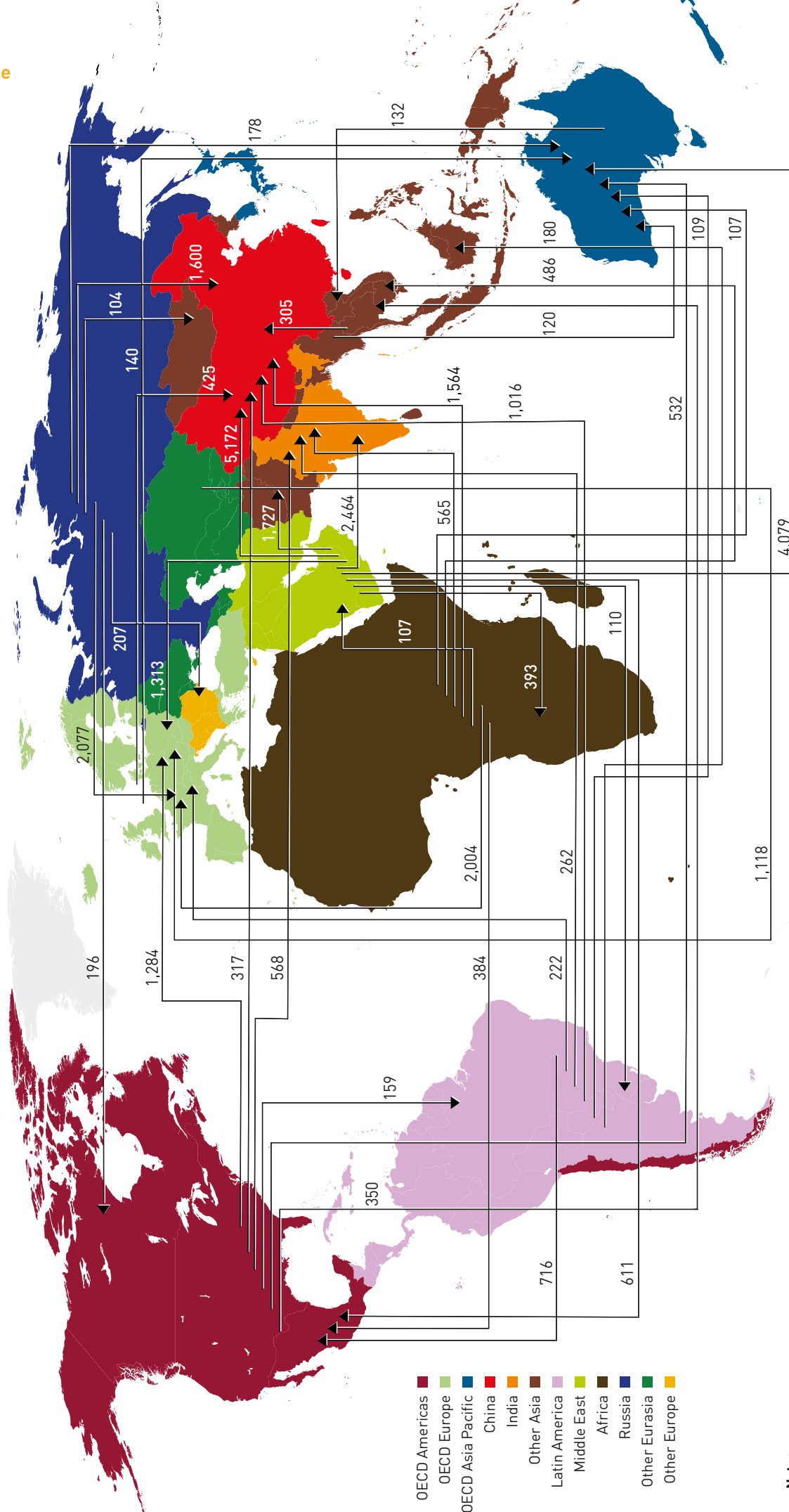
	2017	2018	2019	2020	2021	% change 21/20
Africa	845	845	858	908	926	2.0
Gasoline	47	47	52	49	54	10.6
Kerosene	71	74	72	76	54	-28.3
Distillates	47	47	51	76	59	-22.4
Residuals	170	166	164	273	250	-8.7
Others	510	510	520	433	509	17.5
Russia	2,479	2,510	2,554	2,417	2,385	-1.3
Gasoline	103	99	122	133	100	-25.1
Kerosene	51	59	62	47	49	4.0
Distillates	1,024	1,116	1,050	1,042	997	-4.2
Residuals	671	590	646	585	628	7.4
Others	629	647	675	611	611	0.0
Other Eurasia	547	462	464	447	423	-5.5
Gasoline	97	65	57	82	66	-19.6
Kerosene	13	12	15	7	6	-22.3
Distillates	143	98	110	119	118	-0.4
Residuals	161	168	153	106	126	19.0
Others	132	119	129	134	107	-19.8
Other Europe	217	216	231	197	165	-16.1
Gasoline	85	86	94	79	64	-19.1
Kerosene	6	8	9	4	5	26.1
Distillates	74	67	82	63	47	-26.0
Residuals	22	24	15	11	11	1.6
Others	30	31	30	39	38	-3.7
Total world	30,819	31,440	30,400	27,867	29,370	5.4
Gasoline	5,268	5,487	5,384	4,695	5,306	13.0
Kerosene	2,382	2,502	2,498	1,772	1,808	2.0
Distillates	9,197	9,255	9,045	8,618	8,709	1.1
Residuals	5,273	5,143	4,474	4,354	4,924	13.1
Others	8,698	9,054	9,000	8,428	8,623	2.3
<i>of which</i>						
OPEC	3,899	4,673	3,885	3,483	4,034	15.8
Gasoline	233	403	207	185	220	18.8
Kerosene	376	439	350	315	375	19.2
Distillates	792	1,123	899	833	960	15.3
Residuals	676	797	630	617	791	28.2
Others	1,822	1,911	1,800	1,534	1,688	10.1
OECD	15,872	15,964	15,673	14,211	15,137	6.5
Gasoline	3,187	3,282	3,270	2,797	3,255	16.4
Kerosene	1,070	1,134	1,167	754	723	-4.1
Distillates	4,998	4,632	4,771	4,519	4,525	0.1
Residuals	2,181	2,115	1,675	1,621	1,844	13.7
Others	4,436	4,801	4,789	4,519	4,790	6.0

Notes:

Data may include re-exports and volumes of oil in transit.

Graph 5.1
World inter-regional trade of crude oil, 2021

(1,000 b/d)



Notes:
Excluding intraregional trade.
Only volumes greater than 100,000 b/d are shown.

Table 5.5

World exports of crude oil and petroleum products by country

(1,000 b/d)

	2017	2018	2019	2020	2021	% change 21/20
OECD Americas	11,188	12,651	13,651	13,420	13,577	1.2
Canada	3,384	3,622	3,858	3,569	3,667	2.8
Mexico	1,420	1,424	1,315	1,337	1,262	-5.7
United States	6,376	7,601	8,472	8,498	8,632	1.6
Others	7	4	6	16	16	1.3
OECD Europe	10,081	9,819	9,457	8,735	9,258	6.0
Belgium	624	622	608	502	546	8.7
France	435	424	367	278	279	0.5
Germany	483	461	451	454	521	14.6
Italy	651	589	557	465	535	14.9
Netherlands	2,341	2,315	2,255	1,925	2,264	17.6
Norway	1,794	1,670	1,662	1,890	1,942	2.8
Spain	471	453	420	398	389	-2.3
Sweden	366	347	236	202	272	35.0
United Kingdom	1,198	1,301	1,285	1,122	996	-11.2
Others	1,718	1,637	1,616	1,499	1,515	1.1
OECD Asia Pacific	2,320	2,407	2,519	2,154	2,067	-4.0
Australia	230	279	345	362	316	-12.7
Japan	575	548	609	385	401	4.1
South Korea	1,367	1,432	1,409	1,259	1,206	-4.2
Others	147	148	157	149	145	-2.6
China	1,266	1,328	1,476	1,357	1,342	-1.1
India	1,411	1,344	1,360	1,216	1,283	5.5
Other Asia	4,269	3,904	3,481	3,382	3,442	1.8
Brunei	98	92	125	188	231	22.5
Indonesia	365	276	151	179	201	12.4
Malaysia	977	1,020	933	1,055	1,087	3.0
Singapore	2,103	1,797	1,642	1,447	1,437	-0.7
Vietnam	163	130	132	113	113	0.1
Others	563	589	498	399	373	-6.4
Latin America	4,803	4,526	4,176	3,842	3,604	-6.2
Brazil	1,261	1,318	1,518	1,685	1,538	-8.7
Colombia	740	700	716	630	544	-13.7
Ecuador	422	409	437	399	386	-3.3
Trinidad & Tobago	150	150	67	64	69	6.9
Venezuela	1,826	1,499	944	557	515	-7.4
Others	405	451	493	507	552	8.8
Middle East	22,737	23,618	21,673	19,822	20,109	1.4
Bahrain	397	395	406	365	370	1.4
IR Iran	2,395	2,122	936	685	1,096	60.0
Iraq	3,822	3,908	4,075	3,579	3,598	0.5
Kuwait	2,650	2,680	2,623	2,353	2,344	-0.4
Oman	828	833	875	887	935	5.4
Qatar	1,105	1,030	1,022	924	889	-3.8
Saudi Arabia	8,406	9,343	8,338	7,675	7,571	-1.4
United Arab Emirates	3,032	3,213	3,296	3,258	3,196	-1.9
Others	100	95	101	96	111	15.7
Africa	7,071	7,281	7,312	6,280	6,543	4.2
Algeria	1,202	1,103	1,090	942	939	-0.3
Angola	1,594	1,438	1,335	1,236	1,109	-10.3
Congo	267	313	315	286	255	-11.0
Egypt	183	188	216	268	244	-9.0
Equatorial Guinea	125	121	110	115	93	-18.9
Gabon	201	183	214	205	191	-6.7
Libya	816	1,024	1,057	413	1,180	185.7
Nigeria	1,830	2,001	2,028	1,879	1,603	-14.7
Sudans	108	124	147	144	147	1.6
Others	746	785	798	791	782	-1.1
Russia	7,536	7,717	7,795	7,034	6,896	-2.0
Other Eurasia	2,608	2,542	2,504	2,441	2,299	-5.8
Azerbaijan	641	636	587	529	520	-1.6
Kazakhstan	1,518	1,530	1,533	1,531	1,430	-6.6
Others	449	377	384	381	349	-8.5
Other Europe	228	228	247	211	176	-16.4
Romania	97	103	102	92	83	-10.1
Others	131	125	145	119	94	-21.3
Total world	75,518	77,365	75,650	69,895	70,597	1.0
<i>of which</i>						
OPEC	28,167	28,947	26,363	23,184	23,690	2.2
<i>OPEC percentage</i>	<i>37.3</i>	<i>37.4</i>	<i>34.8</i>	<i>33.2</i>	<i>33.6</i>	
OECD	23,588	24,877	25,627	24,309	24,903	2.4

Notes:

Data may include lease condensates, re-exports of petroleum products and volumes of oil in transit.

Table 5.6
World imports of crude oil by country

(1,000 b/d)

	2017	2018	2019	2020	2021	% change 21/20
OECD Americas	8,953	8,687	7,842	6,789	6,935	2.2
Canada	807	743	856	767	661	-13.8
Chile	177	173	185	147	164	11.5
United States	7,969	7,768	6,801	5,875	6,110	4.0
Others	0	4	0	0	0	0.0
OECD Europe	11,739	11,443	11,545	10,005	10,205	2.0
Belgium	689	667	696	551	579	5.2
France	1,149	1,061	976	666	683	2.6
Germany	1,832	1,720	1,737	1,666	1,645	-1.3
Greece	478	491	461	459	461	0.5
Italy	1,340	1,253	1,275	1,014	1,145	12.9
Netherlands	1,092	1,097	1,153	998	1,060	6.2
Spain	1,332	1,365	1,339	1,105	1,134	2.7
Sweden	401	402	344	375	364	-3.0
Turkey	520	423	627	591	634	7.3
United Kingdom	894	892	910	713	727	2.0
Others	2,014	2,072	2,026	1,868	1,772	-5.1
OECD Asia Pacific	6,958	6,784	6,628	5,698	5,621	-1.4
Australia	335	361	328	238	197	-17.4
Japan	3,235	3,056	3,023	2,472	2,493	0.8
South Korea	3,041	3,034	2,924	2,660	2,613	-1.8
Others	347	333	353	328	318	-2.9
China	8,426	9,260	10,180	10,853	10,301	-5.1
India	4,341	4,544	4,507	4,033	4,244	5.2
Other Asia	3,687	3,713	3,517	3,179	3,129	-1.6
Indonesia	344	336	209	232	206	-10.9
Malaysia	209	210	284	248	131	-47.3
Philippines	197	230	162	130	101	-22.5
Singapore	982	919	848	753	793	5.3
Thailand	906	942	932	837	863	3.0
Others	1,050	1,076	1,083	979	1,035	5.7
Latin America	684	681	603	487	554	13.7
Brazil	150	186	189	134	166	23.6
Ecuador	15	20	20	15	16	9.2
Trinidad & Tobago	90	72	3	0	0	0.0
Venezuela	1	2	4	6	6	0.3
Others	428	401	387	332	366	10.1
Middle East	492	454	486	516	548	6.2
Bahrain	223	220	226	179	183	1.9
United Arab Emirates	68	42	53	163	187	14.7
Others	201	192	207	173	178	2.7
Africa	593	628	649	626	460	-26.5
Algeria	5	5	3	0	0	0.0
Egypt	95	142	121	221	162	-26.7
South Africa	403	437	417	307	220	-28.4
Others	91	43	107	98	78	-20.5
Russia	0	0	0	0	0	0.0
Other Eurasia	416	416	410	371	400	7.8
Belarus	365	368	363	321	342	6.7
Ukraine	21	15	16	25	32	25.2
Others	31	33	31	25	26	5.1
Other Europe	420	414	450	348	343	-1.6
Bulgaria	137	117	141	97	91	-6.5
Croatia	57	59	62	48	48	1.3
Romania	159	170	178	142	140	-1.3
Others	66	68	69	61	63	3.4
Total world	46,709	47,025	46,817	42,905	42,738	-0.4
<i>of which</i>						
OECD	27,650	26,914	26,015	22,492	22,760	1.2

Notes:

Data may include lease condensates and volumes of oil in transit.

Table 5.7

World imports of petroleum products by country

(1,000 b/d)

	2017	2018	2019	2020	2021	% change 21/20
OECD Americas	3,455	3,730	3,955	3,276	3,747	14.4
Canada	274	305	323	194	205	5.5
Mexico	846	1,090	1,138	932	1,004	7.7
United States	2,175	2,174	2,340	1,988	2,359	18.7
Others	159	161	154	162	180	11.1
OECD Europe	8,084	8,101	7,889	6,936	7,245	4.5
Belgium	575	621	564	530	561	6.0
France	861	896	939	926	967	4.3
Germany	880	867	907	752	805	7.1
Italy	347	363	322	270	271	0.5
Netherlands	1,926	1,865	1,798	1,559	1,745	11.9
Spain	400	362	365	308	288	-6.7
Turkey	556	573	444	382	399	4.5
United Kingdom	700	754	704	523	543	3.8
Others	1,839	1,801	1,847	1,685	1,666	-1.1
OECD Asia Pacific	2,522	2,677	2,632	2,582	2,889	11.9
Australia	606	625	634	590	681	15.5
Japan	923	976	896	919	1,012	10.2
South Korea	891	958	995	963	1,080	12.2
Others	102	118	107	111	116	4.0
China	1,369	1,397	1,389	1,318	1,428	8.3
India	844	776	969	1,051	1,013	-3.6
Other Asia	6,067	5,798	5,627	5,299	5,180	-2.3
Indonesia	576	642	596	533	463	-13.2
Malaysia	760	752	679	795	790	-0.6
Singapore	2,621	2,335	2,244	2,088	1,977	-5.3
Others	2,109	2,070	2,108	1,882	1,950	3.6
Latin America	2,010	2,073	2,042	1,594	1,726	8.3
Brazil	698	640	725	606	738	21.7
Ecuador	134	194	188	165	169	2.5
Panama	64	62	65	42	52	25.6
Venezuela	165	245	167	68	69	0.3
Others	948	932	897	714	699	-2.1
Middle East	1,929	2,254	1,550	1,244	1,356	9.0
IR Iran	96	101	98	92	99	7.9
Iraq	116	89	96	77	107	39.7
Kuwait	1	30	14	15	34	130.4
Qatar	21	22	22	21	22	6.7
Saudi Arabia	487	898	319	353	361	2.3
United Arab Emirates	344	351	266	120	129	6.9
Others	866	763	735	567	604	6.5
Africa	2,394	2,352	2,369	2,221	2,315	4.2
Algeria	74	17	43	35	21	-41.9
Angola	71	99	65	134	55	-59.1
Congo	2	2	0	0	0	-0.4
Egypt	318	278	264	149	203	36.3
Equatorial Guinea	6	4	5	4	4	2.2
Gabon	6	8	8	7	6	-20.0
Libya	131	137	144	147	133	-10.1
Morocco	272	267	270	240	248	3.3
Nigeria	392	442	460	466	488	4.7
Tunisia	83	85	89	73	75	2.2
Others	1,040	1,012	1,021	965	1,083	12.3
Russia	26	29	23	31	34	8.0
Other Eurasia	390	372	362	363	398	9.6
Ukraine	201	213	222	221	241	9.0
Others	189	159	140	142	157	10.6
Other Europe	434	426	457	434	465	7.3
Bulgaria	43	36	38	47	49	4.3
Croatia	32	32	49	41	47	13.8
Romania	67	67	67	57	68	19.6
Others	291	292	303	289	301	4.4
Total world	29,523	29,985	29,264	26,349	27,796	5.5
<i>of which</i>						
OPEC	1,890	2,424	1,684	1,519	1,505	-1.0
<i>OPEC percentage</i>	<i>6.4</i>	<i>8.1</i>	<i>5.8</i>	<i>5.8</i>	<i>5.4</i>	
OECD	14,061	14,508	14,476	12,794	13,881	8.5

Notes:

Data may include re-exports and volumes of oil in transit.

Table 5.8

World imports of petroleum products by main petroleum product and region

(1,000 b/d)

	2017	2018	2019	2020	2021	% change 21/20
OECD Americas	3,455	3,730	3,955	3,276	3,747	14.4
Gasoline	1,610	1,677	1,833	1,365	1,697	24.3
Kerosene	321	311	369	252	275	9.3
Distillates	638	738	718	661	736	11.5
Residuals	295	327	273	265	234	-11.9
Others	591	677	763	733	805	9.8
OECD Europe	8,084	8,101	7,889	6,936	7,245	4.5
Gasoline	695	610	632	565	611	8.0
Kerosene	835	894	911	589	582	-1.3
Distillates	3,081	2,958	2,930	2,715	2,711	-0.2
Residuals	827	777	721	776	911	17.3
Others	2,646	2,863	2,695	2,289	2,430	6.2
OECD Asia Pacific	2,522	2,677	2,632	2,582	2,889	11.9
Gasoline	164	179	187	199	229	15.4
Kerosene	156	183	159	106	119	12.2
Distillates	356	389	399	423	491	16.2
Residuals	142	160	102	85	116	37.2
Others	1,705	1,766	1,785	1,770	1,933	9.2
China	1,369	1,397	1,389	1,318	1,428	8.3
Gasoline	0	10	8	11	8	-25.1
Kerosene	79	86	76	54	29	-46.1
Distillates	15	14	24	24	15	-37.5
Residuals	246	298	270	231	251	8.8
Others	1,028	989	1,012	998	1,125	12.7
India	844	776	969	1,051	1,013	-3.6
Gasoline	4	8	49	31	23	-25.1
Kerosene	0	0	0	0	0	0.0
Distillates	28	6	40	33	3	-90.8
Residuals	18	30	48	117	155	33.0
Others	794	732	832	870	831	-4.5
Other Asia	6,067	5,798	5,627	5,299	5,180	-2.3
Gasoline	1,325	1,421	1,473	1,283	1,253	-2.3
Kerosene	256	216	218	175	169	-3.9
Distillates	1,480	1,422	1,353	1,125	1,072	-4.8
Residuals	1,788	1,536	1,417	1,438	1,345	-6.5
Others	1,218	1,203	1,166	1,278	1,341	5.0
Latin America	2,010	2,073	2,042	1,594	1,726	8.3
Gasoline	389	401	434	366	369	0.9
Kerosene	95	106	108	35	39	10.5
Distillates	731	765	725	594	688	15.7
Residuals	246	243	231	160	161	0.8
Others	549	557	543	439	469	6.9
Middle East	1,929	2,254	1,550	1,244	1,356	9.0
Gasoline	835	1,002	644	313	350	11.8
Kerosene	34	28	26	21	30	40.6
Distillates	359	453	199	173	207	19.9
Residuals	552	630	571	610	648	6.2
Others	150	140	111	127	121	-4.7

Table 5.8

World imports of petroleum products by main petroleum product and region

(1,000 b/d)

	2017	2018	2019	2020	2021	% change 21/20
Africa	2,394	2,352	2,369	2,221	2,315	4.2
Gasoline	774	687	799	767	788	2.8
Kerosene	141	156	148	136	141	3.7
Distillates	982	1,003	972	945	966	2.2
Residuals	134	116	94	84	91	7.7
Others	363	389	356	289	329	14.0
Russia	26	29	23	31	34	8.0
Gasoline	1	1	0	2	2	-25.8
Kerosene	1	0	0	1	0	-58.0
Distillates	3	1	1	6	6	-14.5
Residuals	0	0	0	2	3	15.8
Others	20	26	22	19	23	22.3
Other Eurasia	390	372	362	363	398	9.6
Gasoline	95	79	64	56	64	15.3
Kerosene	13	14	10	8	9	10.3
Distillates	177	164	175	179	189	5.4
Residuals	13	5	4	2	2	-20.5
Others	92	110	109	117	134	14.0
Other Europe	434	426	457	434	465	7.3
Gasoline	35	32	34	39	40	2.0
Kerosene	15	15	17	8	12	61.1
Distillates	176	173	197	215	228	6.0
Residuals	125	126	125	68	80	18.7
Others	83	80	84	104	105	0.6
Total world	29,523	29,985	29,264	26,349	27,796	5.5
Gasoline	5,927	6,107	6,157	4,997	5,435	8.8
Kerosene	1,946	2,010	2,042	1,386	1,406	1.4
Distillates	8,026	8,089	7,731	7,094	7,311	3.1
Residuals	4,387	4,248	3,856	3,839	3,997	4.1
Others	9,237	9,532	9,478	9,034	9,648	6.8
<i>of which</i>						
OPEC	1,890	2,424	1,684	1,519	1,505	-1.0
Gasoline	1,013	1,305	948	817	821	0.5
Kerosene	17	101	47	28	35	25.4
Distillates	392	475	335	285	308	8.1
Residuals	312	360	286	340	282	-17.2
Others	157	183	69	50	59	18.6
OECD	14,061	14,508	14,476	12,794	13,881	8.5
Gasoline	2,468	2,465	2,651	2,129	2,537	19.1
Kerosene	1,312	1,389	1,439	948	976	3.0
Distillates	4,075	4,085	4,046	3,799	3,939	3.7
Residuals	1,265	1,263	1,096	1,127	1,261	11.9
Others	4,941	5,306	5,243	4,792	5,169	7.9

Notes:

Data may include re-exports and volumes of oil in transit.

Table 5.9
World imports of crude oil and petroleum products by country

(1,000 b/d)

	2017	2018	2019	2020	2021	% change 21/20
OECD Americas	12,407	12,417	11,797	10,065	10,682	6.1
Canada	1,081	1,048	1,179	961	865	-9.9
Mexico	846	1,093	1,138	932	1,004	7.7
United States	10,144	9,942	9,141	7,863	8,469	7.7
Others	336	334	339	309	344	11.3
OECD Europe	19,823	19,545	19,434	16,941	17,449	3.0
Belgium	1,264	1,288	1,261	1,080	1,141	5.6
France	2,009	1,957	1,915	1,593	1,650	3.6
Germany	2,713	2,587	2,645	2,418	2,450	1.3
Greece	560	563	559	537	552	2.8
Italy	1,686	1,616	1,597	1,284	1,416	10.3
Netherlands	3,018	2,961	2,950	2,557	2,805	9.7
Spain	1,731	1,727	1,703	1,413	1,422	0.6
Sweden	618	608	533	549	500	-8.8
Turkey	1,077	997	1,071	974	1,034	6.2
United Kingdom	1,594	1,646	1,614	1,236	1,270	2.7
Others	3,554	3,595	3,586	3,301	3,210	-2.7
OECD Asia Pacific	9,481	9,461	9,259	8,280	8,510	2.8
Australia	941	986	962	828	878	6.1
Japan	4,159	4,032	3,919	3,391	3,505	3.4
South Korea	3,932	3,992	3,919	3,623	3,693	1.9
Others	449	451	459	439	434	-1.1
China	9,794	10,658	11,570	12,171	11,730	-3.6
India	5,185	5,320	5,475	5,084	5,257	3.4
Other Asia	9,753	9,511	9,144	8,478	8,308	-2.0
Indonesia	920	977	805	765	669	-12.5
Malaysia	969	962	963	1,043	921	-11.7
Philippines	483	483	473	373	433	16.0
Singapore	3,603	3,254	3,091	2,841	2,770	-2.5
Thailand	1,081	1,118	1,148	1,040	1,077	3.5
Others	2,697	2,717	2,664	2,416	2,439	1.0
Latin America	2,693	2,754	2,646	2,081	2,280	9.5
Brazil	848	826	914	740	904	22.1
Ecuador	149	214	207	179	185	3.1
Venezuela	166	247	171	74	74	0.3
Others	1,530	1,467	1,352	1,087	1,117	2.7

Table 5.9

World imports of crude oil and petroleum products by country

(1,000 b/d)

	2017	2018	2019	2020	2021	% change 21/20
Middle East	2,421	2,708	2,036	1,760	1,904	8.2
Bahrain	237	235	242	192	199	3.5
IR Iran	96	101	98	92	99	7.9
Iraq	116	89	96	77	107	39.7
Kuwait	1	30	14	15	34	130.4
Qatar	21	22	22	21	22	6.7
Saudi Arabia	487	898	319	353	361	2.3
United Arab Emirates	412	392	319	284	316	11.4
Others	1,053	940	926	727	766	5.3
Africa	2,987	2,979	3,017	2,847	2,775	-2.5
Algeria	79	23	46	35	21	-41.9
Angola	71	99	65	134	55	-59.1
Congo	2	2	0	0	0	-0.4
Egypt	413	421	385	370	365	-1.3
Equatorial Guinea	6	4	5	4	4	2.2
Gabon	6	8	8	7	6	-20.0
Libya	131	137	144	147	133	-10.1
Morocco	272	267	270	240	248	3.3
Nigeria	392	442	460	466	488	4.7
South Africa	490	514	485	365	292	-20.2
Tunisia	97	96	105	90	95	5.5
Others	1,030	967	1,046	987	1,069	8.3
Russia	26	29	23	31	34	8.0
Other Eurasia	807	788	772	734	798	8.7
Belarus	394	380	367	322	344	6.7
Ukraine	222	229	238	246	272	10.7
Others	191	179	166	166	182	9.9
Other Europe	854	841	907	782	808	3.3
Bulgaria	181	153	179	144	140	-3.0
Croatia	90	91	110	89	95	7.1
Romania	226	237	245	199	209	4.6
Others	358	360	373	350	365	4.2
Total world	76,232	77,010	76,081	69,254	70,534	1.8
<i>of which</i>						
OPEC	1,964	2,473	1,745	1,688	1,698	0.6
OECD	41,711	41,422	40,491	35,286	36,642	3.8

Notes:

Data may include lease condensates, re-exports of petroleum products and volumes of oil in transit.

(1,000 b/d)

Graph 5.2
OPEC Members' crude oil exports by destination, 2021



SECTION 6

Oil transportation

Table 6.1

Average spot freight rates by vessel category

(% of Worldscale)

	Tanker size (1,000 dwt)	2017	2018	2019	2020	2021
GP	16.5–24.9	141.5	134.6	134.0	124.6	125.3
MR	25.0–44.9	163.7	149.3	164.1	146.3	146.2
LR1	45.0–79.9	109.7	113.6	118.3	103.0	95.8
LR2	80.0–159.9	69.3	64.7	72.2	62.4	47.7
VLCC	160.0–319.9	44.9	40.7	50.2	49.6	28.7

Notes:

Average spot freight rates are the average of all spot freight rates by tanker size reported each month in the spot market.

GP = general purpose carrier; MR = medium range carrier; LR1 = large range 1 carrier; LR2 = large range 2 carrier; VLCC = very large crude carrier.

Graph 6.1

Average spot freight rates by vessel category

(% of Worldscale)

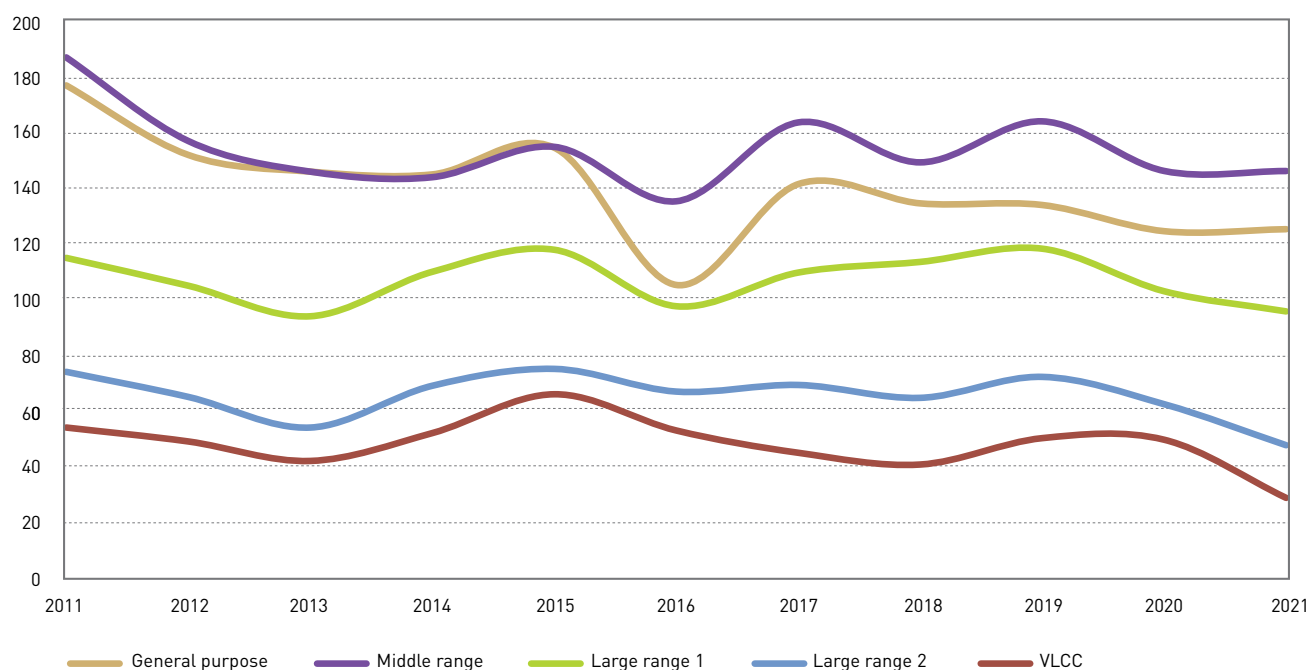


Table 6.2
Dirty tanker spot freight rates

(% of Worldscale and \$/t)

	2017		2018		2019		2020		2021	
	%	\$/t	%	\$/t	%	\$/t	%	\$/t	%	\$/t
ME/EAST	59	8.2	57	9.4	66	13.0	60	14.1	35	6.9
ME/WEST	30	4.8	25	4.7	35	7.8	40	11.6	22	5.6
WAF/EAST	62	13.5	57	14.9	66	20.5	60	22.2	37	11.4
WAF/USGC	75	10.3	72	11.6	81	15.4	67	14.9	53	9.9
WEST/USGC	63	9.2	61	9.8	67	12.5	58	11.7	42	7.9
INDO/EAST	103	9.6	102	11.0	114	14.1	91	13.2	86	10.7
CAR/USEC	121	7.8	133	9.7	128	11.2	115	11.5	104	9.6
MED/MED	106	5.7	115	6.8	116	7.9	88	6.5	96	6.2
MED/WEST	101	8.6	107	10.5	108	12.4	81	10.4	89	9.6

Notes:

ME = Middle East; EAST = Far East; WEST = North-West Europe; WAF = West Africa; USGC = US Gulf Coast; INDO = Indonesia; CAR = Caribbean; USEC = US East Coast; MED = Mediterranean.

Table 6.3
Clean tanker spot freight rates

(% of Worldscale and \$/t)

	2017		2018		2019		2020		2021	
	%	\$/t	%	\$/t	%	\$/t	%	\$/t	%	\$/t
ME/EAST	120	18.2	118	21.1	124	26.2	122	30.0	105	20.8
SING/EAST	161	12.6	137	12.5	151	16.0	137	16.8	139	14.7
WEST/USEC	141	15.4	134	16.5	134	19.3	125	18.9	125	16.1
MED/MED	160	8.0	151	8.4	166	10.4	147	10.2	144	9.4
MED/WEST	170	14.7	160	15.9	175	20.2	156	20.0	154	17.3

Notes:

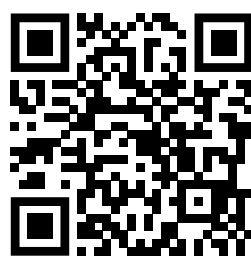
ME = Middle East; EAST = Far East; SING = Singapore; WEST = North-West Europe; USEC = US East Coast; MED = Mediterranean.

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SECTION **7**

Oil prices

Table 7.1

OPEC Reference Basket (ORB) and corresponding components' spot prices

(\$/b)

	Representative crude stream	2017	2018	2019	2020	2021
Algeria	Saharan Blend	54.12	71.44	64.49	42.12	70.89
Angola	Girassol	54.47	71.72	66.11	42.64	71.31
Congo	Djeno	52.77	68.59	61.80	35.77	63.35
Equatorial Guinea	Zafiro	54.04	71.36	65.74	41.54	71.09
Gabon	Rabi Light	53.16	70.30	63.18	40.22	70.34
IR Iran	Iran Heavy	51.71	67.97	61.85	40.77	69.80
Iraq	Basrah Light	51.87	68.62	63.64	41.55	69.86
Kuwait	Kuwait Export	51.60	68.90	64.25	41.49	70.50
Libya	Es Sider	52.82	69.78	63.81	40.06	69.16
Nigeria	Bonny Light	54.55	72.11	65.63	41.53	70.63
Saudi Arabia	Arab Light	52.59	70.59	64.96	41.91	70.65
United Arab Emirates	Murban	54.82	72.20	64.72	42.98	70.09
Venezuela	Merey	47.63	64.47	54.04	28.12	51.45
OPEC	ORB	52.43	69.78	64.04	41.47	69.89
ORB	Volatility ¹	5.00	6.59	4.11	12.55	7.87
ORB	Coefficient of variation ² , %	9.54	9.44	6.43	30.26	11.26

Notes:

1. Standard deviation of daily prices.

2. Ratio of volatility to annual average price.

Graph 7.1

OPEC Reference Basket

(\$/b)

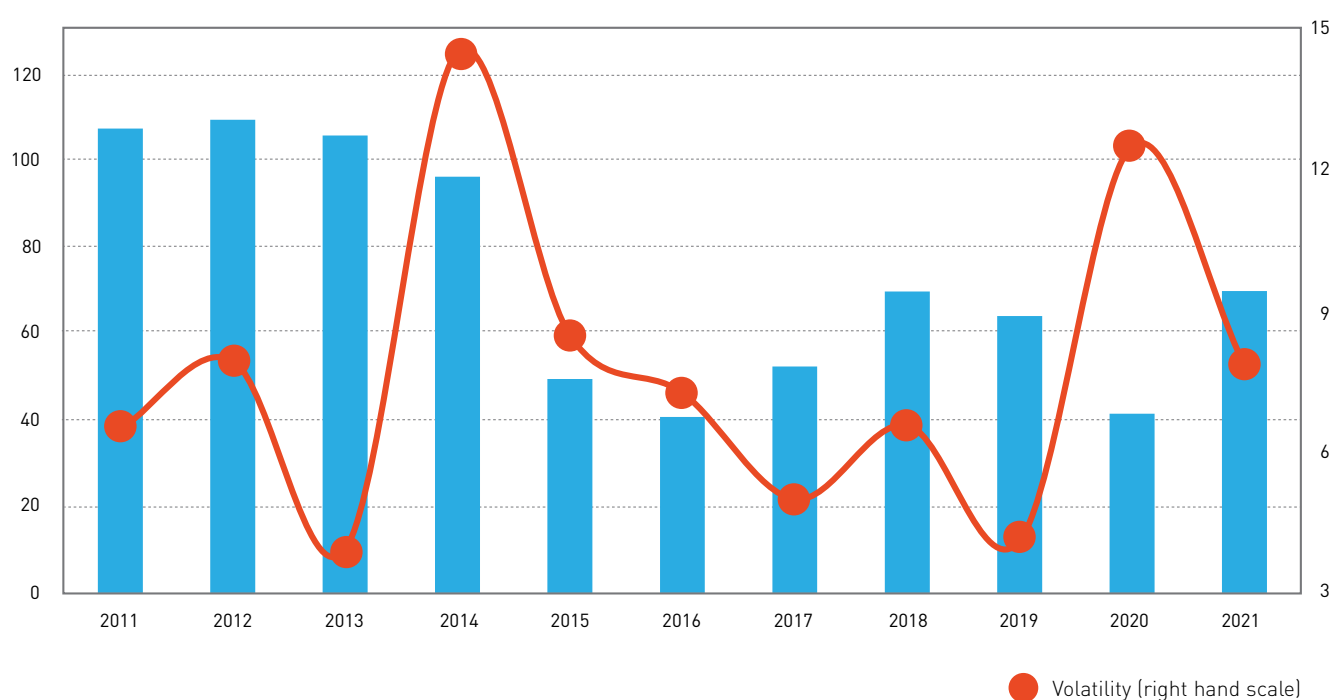


Table 7.2
Selected spot crude oil prices

(\$/b)

	Crude stream	2017	2018	2019	2020	2021
Algeria	Zarzaitine	54.08	71.35	64.42	41.72	70.72
Angola	Cabinda	54.30	71.15	65.34	42.29	71.00
Egypt	Suez Mix	51.56	68.47	62.61	40.23	67.77
IR Iran	Iran Light	52.36	69.10	62.74	40.36	67.90
Indonesia	Minas	48.99	65.44	60.25	41.08	68.75
Libya	Brega	53.62	70.65	63.76	40.12	69.39
Malaysia	Miri	56.93	75.90	69.30	47.15	71.26
Malaysia	Tapis	56.33	73.78	69.15	43.24	72.82
Mexico	Isthmus	54.60	68.74	63.00	36.61	66.20
Mexico	Maya	47.00	62.71	57.51	36.20	64.42
Nigeria	Forcados	54.58	72.56	66.19	41.56	70.81
Norway	Ekosfisk	54.49	71.86	65.24	42.33	71.65
Norway	Oseberg	55.04	72.34	65.38	42.36	71.78
Oman	Oman	53.32	70.10	64.00	43.20	69.46
Qatar	Dukhan	54.12	71.22	63.65	42.44	69.92
Russia	Urals	53.27	70.13	64.38	41.83	69.45
Saudi Arabia	Arab Heavy	50.96	68.79	63.85	41.45	69.98
United Kingdom	Brent	54.17	71.22	64.19	41.67	70.80
United Kingdom	Forties	54.20	71.21	64.66	41.38	71.23
United States	WTI	50.82	65.16	57.02	39.43	68.17
United Arab Emirates	Dubai	53.08	69.68	63.48	42.31	69.38
Spread	WTI — Brent	-3.35	-6.06	-7.17	-2.24	-2.63
	WTI — Dubai	-2.26	-4.52	-6.46	-2.88	-1.21
	Brent — Dubai	1.09	1.54	0.71	-0.64	1.42

Table 7.3

ICE Brent, NYMEX WTI and DME Oman annual average of the 1st, 6th and 12th forward months (\$/b)

	2017	2018	2019	2020	2021
ICE Brent					
1 st forward month	54.74	71.69	64.16	43.21	70.95
6 th forward month	55.08	70.66	62.32	45.15	68.26
12 th forward month	54.88	68.94	61.19	46.20	65.88
NYMEX WTI					
1 st forward month	50.85	64.90	57.04	39.34	68.11
6 th forward month	51.95	63.59	56.80	41.86	65.62
12 th forward month	51.88	61.81	55.47	42.71	62.72
DME Oman					
1 st forward month	53.24	69.88	63.99	43.03	69.50
6 th forward month	53.47	68.25	60.93	44.52	66.59
12 th forward month	53.30	66.51	59.68	45.54	64.20

Table 7.4

OPEC Reference Basket in nominal and real terms

(\$/b)

	2017	2018	2019	2020	2021
Nominal oil price	52.43	69.78	64.04	41.47	69.89
Nominal price adjusted for:					
Exchange rates ¹	52.43	69.87	67.18	44.29	74.41
Inflation ²	52.43	67.80	60.39	38.38	62.41
Combined ³	52.43	67.89	63.35	40.99	66.44

Notes:

Base: 2017 = 100.

1. Based on weighted average index of currency exchange rates in the modified Geneva I Agreement (see Geneva I Agreement definition under 'General Notes').

2. Based on weighted average consumer price indices of modified Geneva I countries and the US.

3. Based on combined indices of exchange rates and inflation.

Table 7.5

Annual average of premium factors for selected OPEC Reference Basket components

(\$/b)

		2017	2018	2019	2020	2021
Europe						
Algeria	Saharan Blend	-0.05	0.23	0.31	0.43	0.08
IR Iran	Iran Heavy	-5.13	-6.27	-6.80	-5.78	-4.38
Iraq	Basrah Light	-3.41	-4.18	-3.03	-2.65	-2.51
Libya	Es Sider	-1.35	-1.43	-0.38	-1.71	-1.65
Nigeria	Bonny Light	0.39	0.89	1.44	-0.16	-0.17
Saudi Arabia	Arab Light	-3.20	-2.47	-1.29	-3.21	-1.70
Asia						
IR Iran	Iran Heavy	-1.11	-0.73	-0.14	-1.19	0.58
Iraq	Basrah Light	-0.64	0.02	1.26	-0.16	1.32
Kuwait	Kuwait Export	-1.32	-0.46	0.91	-1.10	1.24
Saudi Arabia	Arab Light	-0.08	1.56	1.85	-0.43	1.71
US						
Iraq	Basrah Light	-0.08	-0.37	1.33	0.56	-0.17
Saudi Arabia	Arab Light	0.75	0.98	3.00	1.17	1.08
	Arab Medium	-0.53	-0.57	1.35	0.07	0.38
	Arab Heavy	-1.86	-1.74	0.52	-0.44	-0.04

Notes:

Premium factors are related to corresponding benchmark crudes.

Table 7.6

Spot prices of petroleum products in major markets

(\$/b)

	Specifications	2017	2018	2019	2020	2021
US Gulf						
Gasoline	Regular unleaded 87	68.57	80.17	72.70	47.80	86.72
Gasoil	0.2% sulphur	62.31	80.99	74.61	44.92	73.94
Fuel oil	3.0% sulphur	47.05	60.17	52.55	34.72	59.84
Singapore						
Gasoline	Premium unleaded 97	69.51	81.30	74.15	47.61	81.66
Gasoil	0.05% sulphur	65.69	84.05	77.22	48.36	75.96
Fuel oil	380 centistokes	49.24	64.74	56.70	37.53	62.07
Rotterdam						
Gasoline	Premium unleaded 98	75.13	87.34	79.52	51.34	85.89
Gasoil	10ppm sulphur	66.35	85.94	79.50	49.17	78.31
Fuel oil	3.5% sulphur	44.31	59.04	48.90	33.27	60.09

Notes:

US Gulf and Singapore prices apply to cargo. Rotterdam prices apply to barge size lots.

Table 7.7

Crack spreads in major markets

(\$/b)

	Specifications	2017	2018	2019	2020	2021
US Gulf crack spread vs WTI						
Gasoline	Regular unleaded 87	17.69	15.46	15.79	8.28	18.55
Gasoil	0.2% sulphur	11.33	16.15	17.61	5.41	5.77
Fuel oil	3.0% sulphur	-3.82	-4.76	-4.51	-4.65	-8.33
Singapore crack spread vs Dubai						
Gasoline	Premium unleaded 97	16.38	11.90	10.77	5.37	12.28
Gasoil	0.05% sulphur	12.57	14.65	13.75	6.12	6.58
Fuel oil	380 centistokes	-3.87	-4.72	-6.83	-4.67	-7.31
Rotterdam crack spread vs Brent						
Gasoline	Premium unleaded 98	20.89	16.45	15.26	9.86	15.09
Gasoil	10ppm sulphur	12.11	15.00	15.26	7.65	7.51
Fuel oil	3.5% sulphur	-9.90	-11.90	-15.37	-8.26	-10.71

Notes:

US Gulf and Singapore prices apply to cargo. Rotterdam prices apply to barge size lots.

SECTION 8

Taxes on oil

Table 8.1
Composite barrel and its components in major OECD oil consuming countries

	2017			2018			2019			2020			2021		
	\$/b	% share	% change y-o-y	\$/b	% share	% change y-o-y	\$/b	% share	% change y-o-y	\$/b	% share	% change y-o-y	\$/b	% share	% change y-o-y
United States															
Composite barrel	104.01		13.1	119.08		14.5	114.30		-4.0	94.44		-17.4	128.53		36.1
Crude cif price	48.12	46.3	26.8	59.19	49.7	23.0	56.33	49.3	-4.8	36.57	38.7	-35.1	64.41	50	76.1
Tax	23.24	22.3	5.4	23.67	19.9	1.9	23.74	20.8	0.3	23.74	25.1	0.01	23.66	18	-0.4
Industry margin	32.65	31.4	2.0	36.21	30.4	10.9	34.23	29.9	-5.5	34.13	36.1	-0.3	40.47	31	18.6
Canada															
Composite barrel	138.90		12.4	156.69		12.8	144.24		-7.9	121.79		-15.6	170.98		40.4
Crude cif price	54.30	39.1	24.5	70.88	45.2	30.5	63.12	43.8	-10.9	45.79	37.6	-27.5	69.44	41	51.6
Tax	47.42	34.1	6.8	49.25	31.4	3.8	49.42	34.3	0.4	47.83	39.3	-3.2	57.70	34	20.6
Industry margin	37.18	26.8	4.5	36.56	23.3	-1.7	31.70	22.0	-13.3	28.17	23.1	-11.1	43.84	26	55.6
Japan															
Composite barrel	167.39		9.3	193.18		15.4	192.63		-0.3	182.15		-5.4	200.85		10.3
Crude cif price	54.42	32.5	30.2	72.85	37.7	33.9	66.78	34.7	-8.3	46.85	25.7	-29.8	70.25	35	49.9
Tax	69.71	41.6	0.6	72.75	37.7	4.3	75.29	39.1	3.5	78.02	42.8	3.6	75.78	38	-2.9
Industry margin	43.25	25.8	2.7	47.58	24.6	10.0	50.55	26.2	6.2	57.28	31.4	13.3	54.82	27	-4.3
France															
Composite barrel	221.15		12.8	267.71		21.1	254.19		-5.0	229.55		-9.7	270.81		18.0
Crude cif price	54.47	24.6	25.3	71.59	26.7	31.4	64.98	25.6	-9.2	44.04	19.2	-32.2	71.70	26	62.8
Tax	134.81	61.0	9.2	157.19	58.7	16.6	149.98	59.0	-4.6	148.58	64.7	-0.9	159.99	59	7.7
Industry margin	31.87	14.4	9.2	38.93	14.5	22.2	39.23	15.4	0.8	36.92	16.1	-5.9	39.12	14	5.9
Germany															
Composite barrel	216.75		9.4	251.49		16.0	235.45		-6.4	211.70		-10.1	270.41		27.7
Crude cif price	54.02	24.9	26.2	70.50	28.0	30.5	64.43	27.4	-8.6	43.05	20.3	-33.2	71.19	26	65.4
Tax	125.11	57.7	4.7	137.45	54.7	9.9	130.77	55.5	-4.9	126.59	59.8	-3.2	153.24	57	21.1
Industry margin	37.62	17.4	4.9	43.54	17.3	15.7	40.25	17.1	-7.6	42.06	19.9	4.5	45.97	17	9.3
Italy															
Composite barrel	250.31		9.2	280.84		12.2	265.11		-5.6	240.16		-9.4	282.80		17.8
Crude cif price	53.17	21.2	25.6	70.88	25.2	33.3	64.70	24.4	-8.7	43.24	18.0	-33.2	71.45	25	65.2
Tax	156.95	62.7	4.3	168.06	59.8	7.1	159.07	60.0	-5.3	155.47	64.7	-2.3	169.13	60	8.8
Industry margin	40.19	16.1	10.7	41.90	14.9	4.3	41.34	15.6	-1.3	41.44	17.3	0.2	42.22	15	1.9
United Kingdom															
Composite barrel	239.81		3.9	267.01		11.3	258.05		-3.4	236.20		-8.5	289.31		22.5
Crude cif price	54.69	22.8	22.6	72.65	27.2	32.8	65.58	25.4	-9.7	44.62	18.9	-32.0	71.20	25	59.6
Tax	154.91	64.6	-2.6	163.50	61.2	5.5	157.89	61.2	-3.4	155.50	65.8	-1.5	172.64	60	11.0
Industry margin	30.20	12.6	11.6	30.86	11.6	2.2	34.57	13.4	12.0	36.08	15.3	4.3	45.47	16	26.0
67															
Composite barrel	191.19		9.4	219.43		14.8	209.14		-4.7	188.00		-10.1	230.53		22.6
Crude cif price	53.31	27.9	25.8	69.79	31.8	30.9	63.70	30.5	-8.7	43.45	23.1	-31.8	69.95	30	61.0
Tax	101.74	53.2	3.5	110.27	50.3	8.4	106.60	51.0	-3.3	105.11	55.9	-1.4	116.02	50	10.4
Industry margin	36.14	18.9	6.2	39.37	17.9	8.9	38.84	18.6	-1.3	39.44	21.0	1.5	44.56	19	13.0
OECD															
Composite barrel	199.94		10.2	226.14		13.1	216.26		-4.4	191.98		-11.2	231.24		20.4
Crude cif price	53.68	26.8	25.6	70.89	31.3	32.1	64.62	29.9	-8.8	43.97	22.9	-32.0	69.86	30	58.9
Tax	102.62	51.3	5.1	109.87	48.6	7.1	110.34	51.0	0.4	104.64	54.5	-5.2	112.90	49	7.9
Industry margin	43.64	21.8	6.3	45.39	20.1	4.0	41.29	19.1	-9.0	43.38	22.6	5.0	48.48	21	11.8

Notes:

Prices partly estimated and preliminary. Quotations converted from various volumetric units to barrels.

Because of rounding in the conversions from other units to barrels, some results may not agree exactly with the sum of their component parts.

Graph 8.1
Composite barrel and its components

(\$/b)

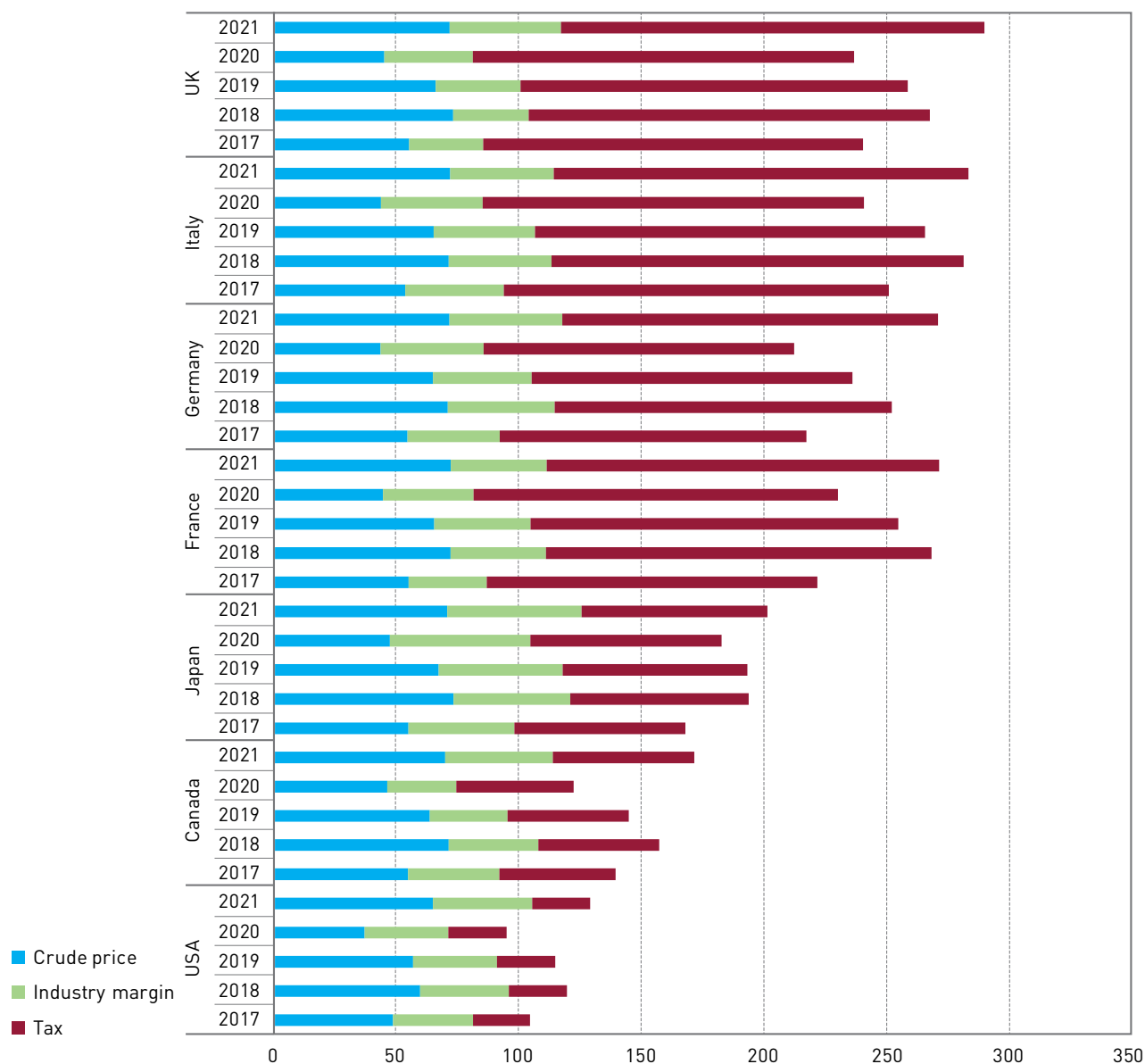


Table 8.2
Tax to CIF crude oil price ratio in major OECD oil consuming countries

(ratio)

	2017	2018	2019	2020	2021
USA	0.48	0.40	0.42	0.65	0.37
Canada	0.87	0.69	0.78	1.04	0.83
Japan	1.28	1.00	1.13	1.67	1.08
France	2.48	2.20	2.31	3.37	2.23
Germany	2.32	1.95	2.03	2.94	2.15
Italy	2.95	2.37	2.46	3.60	2.37
UK	2.83	2.25	2.41	3.49	2.42
G7	1.91	1.58	1.67	2.42	1.66
OECD	1.91	1.55	1.71	2.38	1.62

Notes:

Prices partly estimated and preliminary. Quotations converted from various volumetric units to barrels. Because of rounding in the conversions from other units to barrels, some results may not agree exactly with the sum of their component parts.

Graph 8.2
Composite barrel and its components in percentage [%]

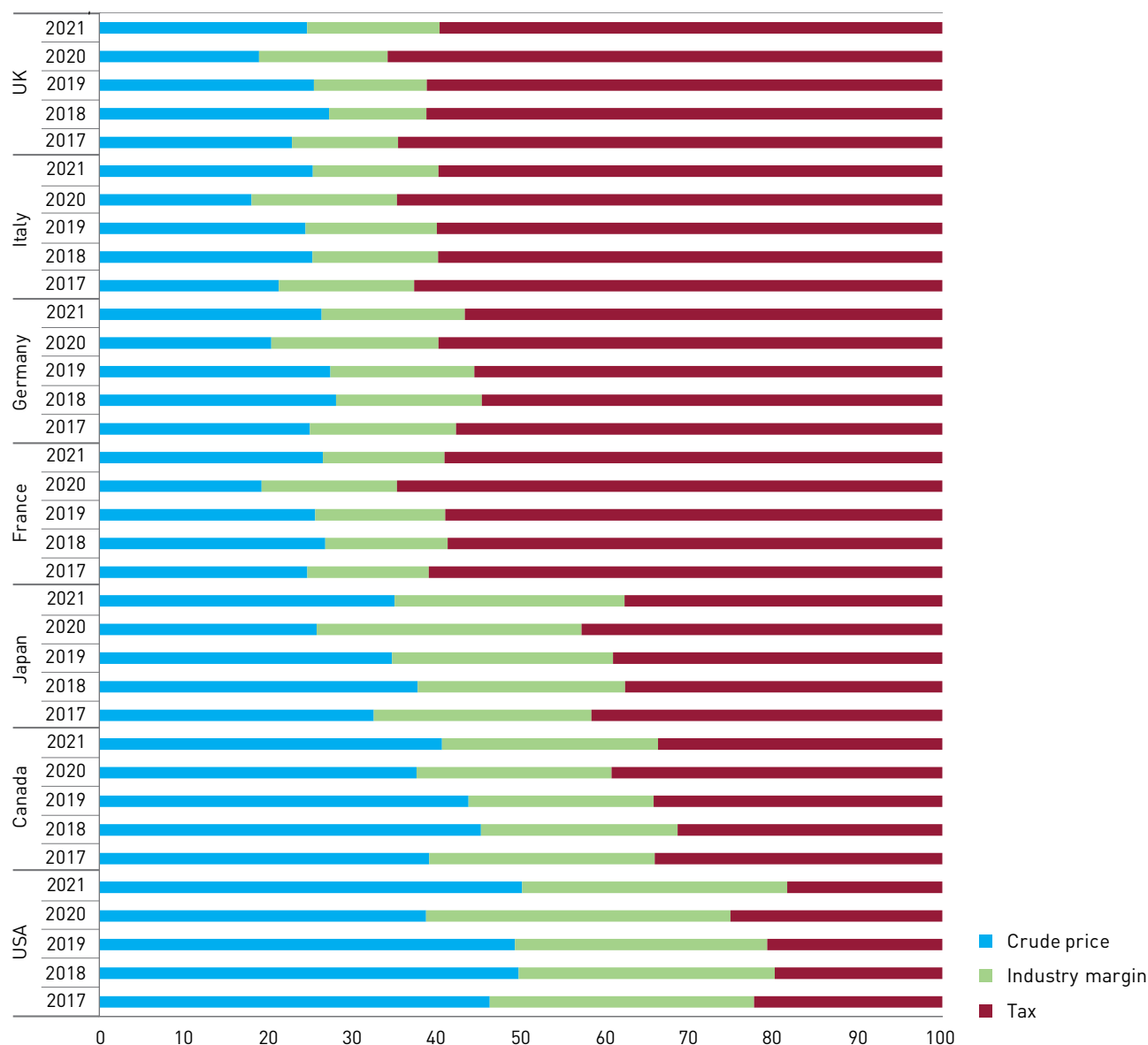


Table 8.3
Euro Big 4 household energy prices, 2021 [\$ /toe NCV]

	Automotive diesel	Premium unleaded 95 RON	Liquefied petroleum gas	Natural gas	Electricity
Tax	1,170	1,418	502	285	1,152
Non-tax	838	886	976	745	2,377
Total price	2,008	2,304	1,477	1,030	3,529
Tax share (%)	58	62	34	28	33

Notes:

Prices partly estimated and preliminary.

Europe 4 includes France, Germany, Italy and the United Kingdom.

Data for LPG pricing in the UK and natural gas pricing in Italy is not available (the average of the remaining three is used).

SECTION 9

Natural gas data

Table 9.1

World proven natural gas reserves by country

(bn s cu m)

	2017	2018	2019	2020	2021	% change 21/20
OECD Americas	14,677	15,808	15,913	15,933	15,317	-3.9
Canada	1,980	2,094	2,471	2,471	2,758	11.6
Chile	5	4	8	8	8	0.0
Mexico	284	273	263	283	305	8.0
United States	12,408	13,437	13,171	13,171	12,246	-7.0
OECD Europe	3,572	2,987	2,858	2,699	2,513	-6.9
Denmark	72	69	66	64	63	-0.8
Germany	37	30	25	22	20	-10.5
Italy	45	48	46	45	44	-2.8
Netherlands	695	196	147	103	63	-39.2
Norway	2,334	2,226	2,165	2,095	1,991	-5.0
Poland	56	73	85	86	88	1.9
United Kingdom	263	276	260	221	172	-22.4
Others	70	69	64	63	74	16.7
OECD Asia Pacific	3,763	3,772	3,475	3,335	2,836	-15.0
Australia	3,193	3,193	2,846	2,716	2,218	-18.3
Japan	28	27	26	24	24	0.0
New Zealand	51	53	53	54	52	-2.8
Others	491	499	550	541	541	0.0
China	2,786	2,779	2,834	2,922	3,269	11.9
India	1,284	1,340	1,381	1,372	1,071	-21.9
Other Asia	7,288	7,277	7,030	6,775	6,544	-3.4
Bangladesh	337	325	300	285	269	-5.6
Brunei	240	246	240	233	233	0.0
Indonesia	2,783	2,875	2,851	2,728	2,553	-6.4
Malaysia	2,346	2,290	2,213	2,179	2,179	0.0
Myanmar	265	256	248	240	240	0.0
Pakistan	502	499	446	428	428	0.0
Thailand	181	171	138	112	85	-23.7
Vietnam	199	195	190	186	186	0.0
Others	435	420	404	384	370	-3.6
Latin America	7,528	7,392	7,400	7,233	7,146	-1.2
Argentina	355	372	400	376	377	0.2
Bolivia	303	253	253	253	253	0.0
Brazil	370	368	365	338	312	-7.7
Colombia	110	107	90	83	79	-5.2
Ecuador	11	11	11	10	10	0.0
Peru	365	300	300	300	287	-4.3
Trinidad & Tobago	298	298	298	274	279	1.7
Venezuela	5,707	5,674	5,674	5,590	5,541	-0.9
Others	9	9	9	9	9	0.0
Middle East	79,477	78,485	80,742	80,794	81,321	0.7
IR Iran	33,810	33,330	33,899	33,988	33,988	0.0
Iraq	3,744	3,729	3,714	3,714	3,714	0.0
Kuwait	1,784	1,784	1,784	1,784	1,784	0.0
Oman	705	677	674	673	673	0.0
Qatar	23,861	23,846	23,831	23,831	23,831	0.0
Saudi Arabia	8,715	8,260	8,366	8,437	8,507	0.8
United Arab Emirates	6,091	6,091	7,726	7,730	8,200	6.1
Others	767	767	748	637	624	-2.1
Africa	17,940	18,015	18,044	17,999	18,098	0.5
Algeria	4,504	4,504	4,504	4,504	4,504	0.0
Angola	422	383	343	301	301	0.0
Cameroon	172	171	170	179	179	0.0
Congo	285	285	284	284	284	0.0
Egypt	2,221	2,221	2,209	2,209	2,209	0.0
Equatorial Guinea	42	42	39	39	39	0.0
Gabon	26	26	26	26	26	0.0
Libya	1,505	1,505	1,505	1,505	1,505	0.0
Mozambique	2,840	2,840	2,840	2,840	2,840	0.0
Nigeria	5,627	5,675	5,761	5,750	5,848	1.7
Others	297	364	362	363	363	0.0
Russia	50,508	49,571	49,154	47,759	47,759	0.0
Other Eurasia	19,102	19,437	19,910	19,899	19,899	0.0
Azerbaijan	1,074	1,435	1,917	1,917	1,917	0.0
Kazakhstan	1,830	1,830	1,830	1,830	1,830	0.0
Turkmenistan	13,950	13,950	13,950	13,950	13,950	0.0
Ukraine	384	358	349	338	338	0.0
Uzbekistan	1,846	1,846	1,846	1,846	1,846	0.0
Others	18	18	18	18	18	0.0
Other Europe	111	103	97	92	92	0.0
Bulgaria	4	4	4	4	4	0.0
Romania	92	87	81	77	77	0.0
Others	15	12	12	11	11	0.0
Total world	208,036	206,966	208,838	206,812	205,865	-0.5
of which						
OPEC	72,261	71,288	73,626	73,651	74,242	0.8
OPEC percentage	34.7	34.4	35.3	35.6	36.1	
OECD	22,012	22,567	22,246	21,967	20,666	-5.9

Notes: Figures as at year-end.

Graph 9.1
Natural gas flows during 2021

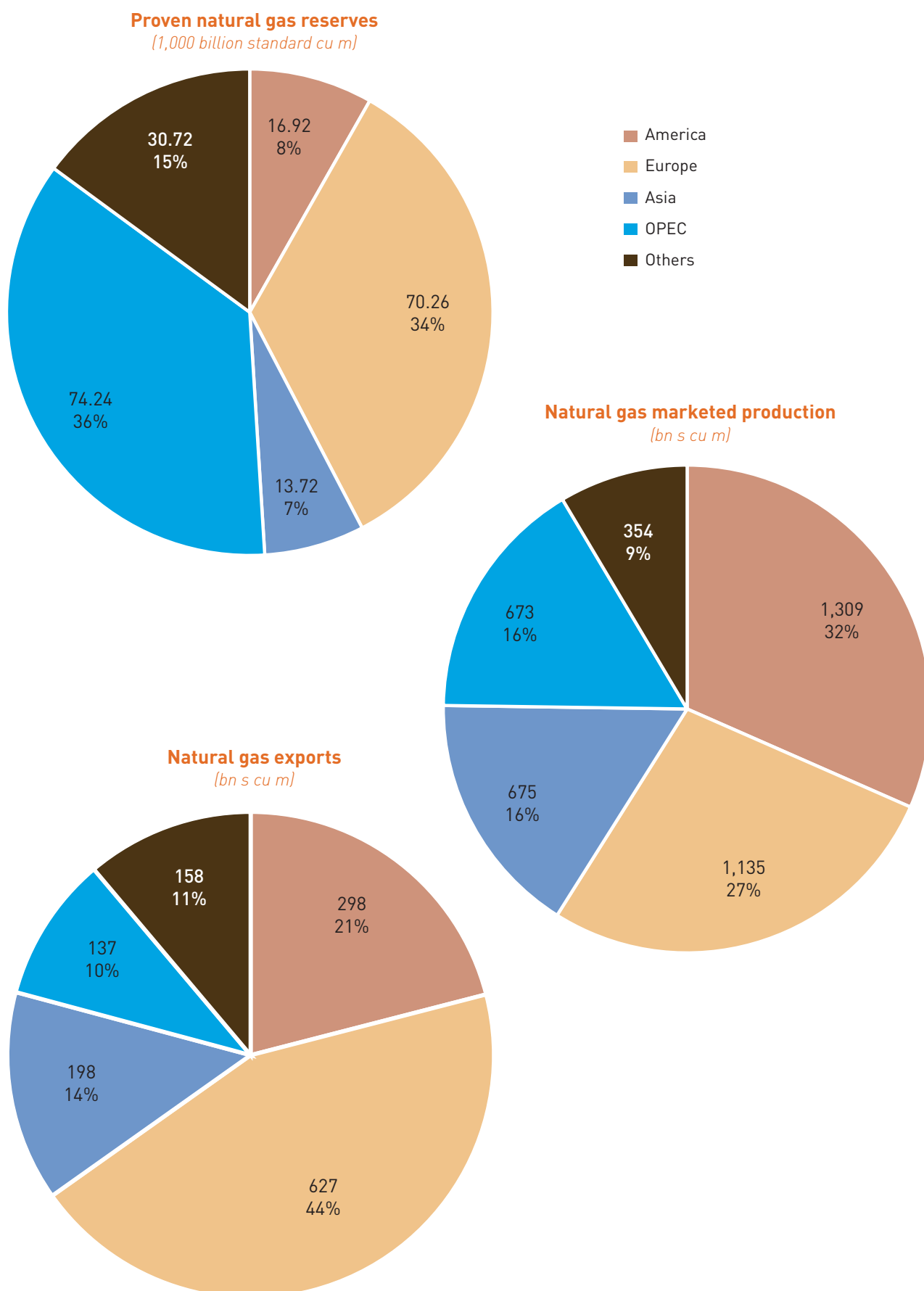


Table 9.2

Yearly and cumulative marketed natural gas production in OPEC Members

(million s cu m)

Marketed natural gas production yearly

	1960	1970	1980	1990	2000	2010	2021
Algeria	0	2,599	11,647	51,600	83,119	84,615	105,043
Angola	0	40	260	540	570	733	8,820
Congo	0	10	10	0	0	575	415
Equatorial Guinea	0	0	0	0	30	6,540	7,047
Gabon	7	20	70	100	80	80	454
IR Iran	960	12,881	7,138	24,200	60,240	187,357	257,119
Iraq	604	780	1,281	3,980	3,150	7,511	9,586
Kuwait	943	2,037	4,071	4,190	9,600	11,733	12,728
Libya	0	294	5,170	6,200	5,880	16,814	24,244
Nigeria	0	111	1,070	4,010	12,460	28,099	48,572
Saudi Arabia	0	1,230	11,431	33,520	49,810	87,660	120,485
United Arab Emirates	0	756	6,863	22,110	38,380	51,282	54,485
Venezuela	4,958	7,710	14,805	21,966	27,801	19,728	23,720
OPEC	7,472	28,468	63,816	172,416	291,120	502,727	672,718

Cumulative marketed natural gas production up to and including year

	1960	1970	1980	1990	2000	2010	2021
Algeria	0	15,428	89,208	472,552	1,102,721	1,940,983	2,920,481
Angola	0	40	844	4,684	10,354	17,147	66,412
Congo	0	10	119	149	149	1,797	10,110
Equatorial Guinea	0	0	0	0	70	25,870	107,373
Gabon	7	147	2,132	3,162	4,142	5,012	9,660
IR Iran	960	33,063	203,263	353,113	790,718	1,906,280	4,382,673
Iraq	604	6,991	19,128	43,668	72,138	109,022	206,089
Kuwait	943	22,483	59,123	109,793	179,932	290,934	459,924
Libya	0	294	43,981	93,091	155,921	269,950	477,239
Nigeria	0	861	6,387	35,998	95,883	335,691	825,580
Saudi Arabia	0	8,588	58,961	275,956	708,196	1,410,617	2,609,412
United Arab Emirates	0	2,379	30,627	178,652	491,312	967,964	1,571,815
Venezuela	4,958	69,435	184,608	363,836	628,796	862,302	1,120,100
OPEC	7,472	159,719	698,381	1,934,654	4,240,332	8,143,569	14,766,869

Table 9.3

World marketed production of natural gas by country

(million s cu m)

	2017	2018	2019	2020	2021	% change 21/20
OECD America	998,521	1,098,499	1,179,810	1,160,498	1,177,757	1.5
Canada	190,625	195,465	188,020	183,528	189,112	3.0
Chile	1,222	1,522	1,750	1,402	1,276	-9.0
Mexico	31,586	28,299	27,038	25,581	23,917	-6.5
United States	775,088	873,213	963,002	949,987	963,452	1.4
OECD Europe	245,714	234,419	218,701	202,087	191,546	-5.2
Denmark	4,835	4,119	3,133	1,840	1,904	3.5
Germany	6,974	5,945	5,741	4,874	4,787	-1.8
Italy	5,540	5,451	4,851	3,932	3,323	-15.5
Netherlands	45,662	38,942	33,607	24,167	21,958	-9.1
Norway	127,733	126,415	119,050	116,208	116,700	0.4
Poland	5,706	5,616	5,669	5,593	5,524	-1.2
United Kingdom	41,887	40,658	40,287	39,925	32,434	-18.8
Others	7,377	7,273	6,363	5,548	4,917	-11.4
OECD Asia Pacific	131,154	148,730	169,756	170,464	173,148	1.6
Australia	112,583	130,519	151,924	153,014	155,923	1.9
Japan	4,698	4,407	3,872	3,589	4,057	13.0
New Zealand	4,987	4,408	4,516	4,477	3,912	-12.6
Others	8,886	9,396	9,444	9,384	9,256	-1.4
China	144,000	154,800	169,970	185,900	193,286	4.0
India	31,750	31,700	31,160	27,700	32,425	17.1
Other Asia	298,750	293,540	290,910	272,784	275,850	1.1
Bangladesh	26,500	26,450	25,310	23,500	24,000	2.1
Brunei	11,800	11,390	11,630	11,100	10,065	-9.3
Indonesia	70,400	70,200	63,940	59,984	60,078	0.2
Malaysia	68,000	66,310	68,100	62,900	67,031	6.6
Myanmar	16,460	16,070	16,660	15,790	15,790	0.0
Pakistan	38,820	38,100	37,400	35,800	36,500	2.0
Thailand	37,400	36,440	37,420	33,700	33,036	-2.0
Vietnam	8,730	8,830	9,010	8,040	8,040	0.0
Others	20,640	19,750	21,440	21,970	21,310	-3.0
Latin America	175,452	170,645	169,099	152,256	155,370	2.0
Argentina	44,657	47,021	49,350	45,100	45,293	0.4
Bolivia	20,200	19,000	16,750	16,160	16,801	4.0
Brazil	23,750	21,700	22,180	20,050	20,985	4.7
Colombia	9,600	9,500	9,770	9,500	9,595	1.0
Ecuador	463	349	310	300	310	3.3
Peru	12,900	12,420	13,700	11,990	12,000	0.1
Trinidad & Tobago	32,900	34,900	35,530	30,240	25,776	-14.8
Venezuela	29,793	24,785	20,559	18,026	23,720	31.6
Others	1,190	970	950	890	890	0.0
Middle East	652,091	653,852	674,333	707,972	721,030	1.8
IR Iran	238,003	233,060	241,730	249,630	257,119	3.0
Iraq	10,650	11,130	11,544	7,374	9,586	30.0
Kuwait	17,102	17,738	13,952	12,883	12,728	-1.2
Oman	31,250	35,650	35,880	35,670	36,000	0.9
Qatar	165,370	170,040	176,300	205,720	207,034	0.6
Saudi Arabia	115,000	118,000	117,000	119,000	120,485	1.2
United Arab Emirates	54,086	47,624	55,097	55,064	54,485	-1.1
Others	20,630	20,610	22,830	22,630	23,593	4.3
Africa	238,208	259,011	268,085	253,100	282,186	11.5
Algeria	94,778	95,898	90,302	85,119	105,043	23.4
Angola	3,111	9,614	10,546	11,313	8,820	-22.0
Cameroon	600	1,600	2,360	2,380	2,380	0.0
Congo	860	867	580	405	415	2.5
Egypt	51,900	62,100	68,870	61,770	70,308	13.8
Equatorial Guinea	8,237	7,751	6,235	6,023	7,047	17.0
Gabon	487	530	464	502	454	-9.6
Libya	20,690	23,220	26,830	20,930	24,244	15.8
Nigeria	45,434	44,251	47,828	49,947	48,572	-2.8
Others	12,110	13,180	14,070	14,710	14,903	1.3
Russia	636,350	668,230	620,460	577,620	719,300	24.5
Other Eurasia	195,325	205,041	210,748	196,839	213,718	8.6
Azerbaijan	16,900	17,800	22,840	24,280	30,730	26.6
Kazakhstan	25,800	27,040	26,500	25,680	29,400	14.5
Turkmenistan	80,500	84,440	86,700	82,700	87,662	6.0
Ukraine	19,850	20,330	20,140	19,740	19,255	-2.5
Uzbekistan	52,000	55,170	54,300	44,200	46,410	5.0
Others	275	261	268	239	261	9.2
Other Europe	12,130	11,700	11,340	10,230	10,042	-1.8
Bulgaria	70	10	30	50	29	-42.0
Croatia	1,180	1,000	840	700	628	-10.3
Romania	10,300	10,120	9,950	9,010	8,912	-1.1
Others	580	570	520	470	473	0.6
Total world	3,759,445	3,930,167	4,014,372	3,917,450	4,145,657	5.8
of which						
OPEC	638,232	634,468	642,667	636,218	672,718	5.7
OPEC percentage	17.0	16.1	16.0	16.2	16.2	
OECD	1,375,389	1,481,648	1,568,267	1,533,049	1,542,451	0.6

Table 9.4
World natural gas exports by country

(million s cu m)

	2017	2018	2019	2020	2021	% change 21/20
OECD America	174,728	182,044	208,586	220,593	267,987	21.5
Canada	85,123	79,637	76,629	70,932	79,558	12.2
United States	89,305	102,162	131,884	149,610	188,397	25.9
Others	300	245	73	51	32	-36.2
OECD Europe	324,446	316,097	310,505	305,419	307,364	0.6
Austria	43,371	41,576	40,152	38,617	36,708	-4.9
Belgium	28,545	25,238	24,627	24,632	22,710	-7.8
Denmark	2,235	1,538	1,344	1,713	1,740	1.6
France	6,038	5,925	10,789	9,102	5,787	-36.4
Germany	31,540	38,440	41,830	50,092	62,613	25.0
Italy	271	396	326	316	316	0.0
Netherlands	56,126	54,475	47,664	39,976	43,276	8.3
Norway	123,090	119,950	113,250	112,270	111,449	-0.7
Spain	2,876	3,244	1,121	1,188	3,005	152.9
United Kingdom	11,347	7,610	8,044	9,595	6,816	-29.0
Others	19,007	17,705	21,358	17,918	12,944	-27.8
OECD Asia Pacific	74,943	91,662	100,253	102,474	106,991	4.4
Australia	74,803	91,582	100,253	102,434	106,991	4.4
Others	140	80	0	40	0	-100.0
China	3,472	3,402	3,640	5,196	5,436	4.6
India	0	90	90	0	0	0.0
Other Asia	99,140	92,880	93,040	89,420	85,994	-3.8
Brunei	8,920	8,270	8,590	7,990	6,769	-15.3
Indonesia	29,820	29,620	24,860	24,250	22,440	-7.5
Malaysia	36,760	33,650	35,560	34,210	34,205	0.0
Myanmar	12,150	11,310	12,240	11,370	11,000	-3.3
Others	11,490	10,030	11,790	11,600	11,580	-0.2
Latin America	35,630	35,580	35,560	32,610	29,709	-8.9
Argentina	10	300	1,710	1,520	2,083	37.1
Bolivia	15,390	13,840	11,750	11,810	12,900	9.2
Peru	5,500	4,700	5,200	5,080	4,000	-21.3
Trinidad & Tobago	14,610	16,670	16,900	13,920	10,446	-25.0
Others	120	70	0	280	280	0.0
Middle East	159,042	161,228	164,388	160,946	173,489	7.8
IR Iran	12,927	12,240	12,350	11,520	18,425	59.9
Oman	11,150	13,280	13,440	13,200	12,700	-3.8
Qatar	126,190	126,770	129,340	127,460	134,515	5.5
United Arab Emirates	8,775	8,938	9,258	8,766	7,849	0.0
Others	0	0	0	0	0	0.0
Africa	107,900	103,096	108,222	98,010	121,981	24.5
Algeria	53,891	51,424	42,776	39,459	54,759	38.8
Angola	5,245	5,486	5,904	6,367	5,084	0.0
Congo	190	0	0	0	0	0.0
Egypt	1,330	2,860	7,610	2,910	5,500	89.0
Equatorial Guinea	6,183	5,509	4,679	4,026	4,694	16.6
Libya	4,470	4,251	5,700	4,292	8,000	86.4
Nigeria	32,511	28,626	35,953	35,586	38,464	8.1
Others	4,080	4,940	5,600	5,370	5,480	2.0
Russia	229,420	249,870	262,400	239,450	247,100	3.2
Other Eurasia	71,100	76,040	78,240	62,180	71,625	15.2
Azerbaijan	8,860	9,190	11,810	13,400	18,944	41.4
Kazakhstan	14,220	17,550	17,840	12,640	15,101	19.5
Turkmenistan	37,700	36,400	36,370	32,560	35,200	8.1
Uzbekistan	10,320	12,900	12,220	3,580	2,380	0.0
Others	0	0	0	0	0	0.0
Other Europe	0	0	500	433	1,146	164.7
Bulgaria	0	0	500	400	1,069	167.3
Others	0	0	0	33	77	133.3
Total world	1,279,820	1,311,988	1,365,424	1,316,731	1,418,823	7.8
<i>of which</i>						
OPEC	124,192	116,473	116,620	110,016	137,275	24.8
<i>OPEC percentage</i>	<i>9.7</i>	<i>8.9</i>	<i>8.5</i>	<i>8.4</i>	<i>9.7</i>	
OECD	574,117	589,803	619,344	628,486	682,342	8.6

Notes:

Data may include re-exports and natural gas in transit.

Table 9.5
World natural gas imports by country

(million s cu m)

	2017	2018	2019	2020	2021	% change 21/20
OECD Americas	166,404	164,931	168,094	159,573	169,460	6.2
Canada	25,266	23,175	26,071	23,642	24,186	2.3
Mexico	50,872	55,306	59,430	58,820	61,270	4.2
United States	85,891	81,802	77,641	72,246	79,516	10.1
Others	4,375	4,648	4,952	4,865	4,488	-7.7
OECD Europe	682,459	683,780	702,435	661,646	673,100	1.7
Austria	51,984	49,511	51,374	45,080	41,460	-8.0
Belgium	45,560	43,081	43,143	42,696	41,004	-4.0
France	48,260	49,316	54,670	46,140	45,410	-1.6
Germany	153,555	162,392	158,897	155,493	154,452	-0.7
Italy	69,622	67,877	70,912	66,227	72,728	9.8
Netherlands	54,234	60,895	59,286	59,922	57,426	-4.2
Poland	44,760	45,170	44,790	41,039	39,361	-4.1
Spain	34,622	34,817	37,190	32,489	36,965	13.8
Turkey	55,121	50,007	45,212	48,125	58,701	22.0
United Kingdom	47,623	48,177	47,620	43,925	51,071	16.3
Others	77,118	72,537	89,341	80,510	74,522	-7.4
OECD Asia Pacific	175,808	184,240	171,661	168,336	172,332	2.4
Australia	6,200	6,258	5,772	6,711	6,069	-9.6
Japan	120,501	119,372	111,308	107,286	104,514	-2.6
South Korea	48,651	58,022	53,813	53,559	60,951	13.8
Others	456	588	768	780	798	2.3
China	92,020	121,280	129,730	136,520	142,687	4.5
India	26,740	29,590	31,500	33,900	31,272	-7.8
Other Asia	61,370	66,490	74,260	77,450	77,742	0.4
Malaysia	2,640	2,380	4,070	3,940	1,532	-61.1
Pakistan	6,570	8,970	10,700	9,760	11,794	20.8
Singapore	13,420	14,500	14,440	15,570	14,412	-7.4
Thailand	13,830	14,200	14,370	14,390	15,719	9.2
Others	24,910	26,440	30,680	33,790	34,285	1.5
Latin America	24,630	24,120	20,610	22,010	23,959	8.9
Argentina	12,200	10,890	7,330	7,960	7,109	-10.7
Brazil	10,720	10,810	9,660	9,720	11,785	21.2
Venezuela	0	0	0	0	0	0.0
Others	1,710	2,420	3,620	4,330	5,065	17.0
Middle East	43,528	46,508	39,157	41,078	44,017	7.2
IR Iran	4,731	5,910	1,270	20	0	-100.0
Iraq	1,456	4,100	6,104	7,200	9,738	35.3
Jordan	4,560	4,030	2,770	4,170	4,268	2.4
Kuwait	4,781	4,418	4,509	5,335	7,024	31.7
Oman	1,970	2,000	2,000	1,600	1,333	-16.7
United Arab Emirates	26,030	26,050	22,504	22,653	21,554	-4.9
Others	0	0	0	100	100	0.0
Africa	17,320	12,980	10,140	11,930	7,318	-38.7
Egypt	8,040	3,060	0	2,150	0	-100.0
Morocco	1,140	1,000	950	850	878	3.3
South Africa	4,080	4,120	3,950	3,900	3,864	-0.9
Tunisia	3,680	4,100	4,440	4,130	1,540	-62.7
Others	380	700	800	900	1,036	15.1
Russia	18,150	15,100	19,000	8,590	9,100	5.9
Other Eurasia	42,340	44,080	46,780	41,790	45,534	9.0
Belarus	17,600	18,810	18,750	17,340	18,163	4.7
Kazakhstan	5,600	8,500	7,900	3,200	7,680	140.0
Ukraine	10	100	100	100	110	10.0
Others	19,130	16,670	20,030	21,150	19,581	-7.4
Other Europe	9,370	9,660	10,830	10,140	14,923	47.2
Bulgaria	3,120	2,970	3,240	3,210	6,473	101.7
Romania	1,610	1,790	2,360	1,750	3,560	103.4
Others	4,640	4,900	5,230	5,180	4,890	-5.6
Total world	1,360,139	1,402,759	1,424,197	1,372,963	1,411,444	2.8
of which						
OPEC	36,998	40,478	34,387	35,208	38,316	8.8
OPEC percentage	2.7	2.9	2.4	2.6	2.7	
OECD	1,024,671	1,032,951	1,042,190	989,555	1,014,892	2.6

Notes:

Data may include re-exports and natural gas in transit.

Table 9.6

World natural gas demand by country

(million s cu m)

	2017	2018	2019	2020	2021	% change 21/20
OECD America	989,604	1,080,723	1,111,516	1,086,531	1,090,112	0.3
Canada	133,063	138,296	138,954	133,021	136,579	2.7
Chile	5,396	6,164	6,229	6,233	6,111	-2.0
Mexico	82,458	83,605	86,468	84,401	85,186	0.9
United States	768,687	852,658	879,865	862,876	862,236	-0.1
OECD Europe	526,642	510,903	522,472	507,056	536,907	5.9
Austria	9,494	8,982	9,267	8,823	9,335	5.8
Belgium	17,265	17,716	18,163	18,276	18,496	1.2
France	42,874	40,861	41,614	38,562	40,746	5.7
Germany	92,473	85,316	91,792	89,292	93,626	4.9
Italy	75,150	72,667	74,316	70,920	75,250	6.1
Netherlands	43,457	43,041	44,912	44,067	42,928	-2.6
Poland	20,381	20,836	21,311	21,993	23,338	6.1
Spain	31,007	30,925	35,399	31,738	33,301	4.9
Turkey	53,598	49,542	44,995	48,232	59,302	23.0
United Kingdom	79,562	80,870	79,321	73,336	76,810	4.7
Others	61,381	60,147	61,382	61,817	63,775	3.2
OECD Asia Pacific	226,158	233,343	238,181	237,620	238,806	0.5
Australia	43,980	45,195	57,443	57,291	55,336	-3.4
Japan	121,377	121,905	114,172	112,087	110,126	-1.7
New Zealand	5,068	4,547	4,533	4,461	3,842	-13.9
South Korea	45,185	52,012	50,743	51,751	57,457	11.0
Others	10,548	9,684	11,290	12,030	12,045	0.1
China	236,020	276,080	299,610	322,420	352,252	9.3
India	58,490	61,200	62,570	61,600	64,785	5.2
Other Asia	254,168	260,031	266,118	255,459	265,746	4.0
Bangladesh	26,500	27,360	30,560	29,500	31,000	5.1
Brunei	2,880	3,120	3,040	3,110	2,923	-6.0
Indonesia	40,580	40,580	39,350	36,684	39,395	7.4
Malaysia	33,740	34,700	36,980	33,720	34,871	3.4
Myanmar	4,310	4,760	4,420	4,740	4,850	2.3
Pakistan	45,390	47,070	48,100	45,560	48,294	6.0
Thailand	51,230	50,640	51,790	48,090	48,472	0.8
Vietnam	8,730	8,830	9,010	8,040	8,249	2.6
Others	40,808	42,971	42,868	46,015	47,692	3.6
Latin America	156,664	148,677	145,150	131,855	154,596	17.2
Argentina	50,350	51,150	48,220	45,840	50,319	9.8
Bolivia	3,800	3,890	4,100	3,450	4,035	17.0
Brazil	34,390	32,440	31,840	29,770	45,103	51.5
Colombia	9,650	9,760	10,130	10,250	10,865	6.0
Peru	7,490	7,730	8,300	7,060	8,006	13.4
Trinidad & Tobago	20,280	18,520	18,730	16,010	16,483	3.0
Venezuela	26,204	20,117	17,550	13,725	13,650	-0.5
Others	4,500	5,070	6,280	5,750	6,135	6.7

Table 9.6
World natural gas demand by country

(million s cu m)

	2017	2018	2019	2020	2021	% change 21/20
Middle East	520,661	540,576	549,114	551,319	564,289	2.4
Bahrain	16,500	16,630	18,900	19,200	20,163	5.0
IR Iran	217,760	227,820	231,220	233,000	243,019	4.3
Iraq	9,457	13,025	17,598	18,798	19,324	2.8
Kuwait	21,067	21,860	18,460	18,218	19,752	8.4
Oman	22,570	24,250	23,760	24,150	24,633	2.0
Qatar	38,020	40,950	41,530	40,490	41,300	2.0
Saudi Arabia	115,000	118,000	122,720	119,000	120,000	0.8
United Arab Emirates	71,596	70,030	68,226	70,763	68,190	-3.6
Others	8,690	8,010	6,700	7,700	7,908	2.7
Africa	137,902	145,140	151,616	153,689	159,926	4.1
Algeria	40,373	44,429	46,809	45,226	49,568	9.6
Angola	780	785	789	821	826	0.6
Congo	680	867	580	405	415	2.5
Egypt	58,130	61,450	60,710	60,280	63,586	5.5
Equatorial Guinea	1,577	1,523	1,477	1,876	2,193	16.9
Gabon	407	530	635	665	554	-16.8
Libya	5,250	5,040	6,939	8,554	10,475	22.5
Nigeria	12,795	10,756	12,705	14,361	10,108	-29.6
South Africa	4,880	5,080	5,050	4,950	4,914	-0.7
Tunisia	4,980	5,350	5,570	5,190	5,346	3.0
Others	8,050	9,330	10,350	11,360	11,941	5.1
Russia	435,530	445,660	449,280	443,000	465,000	5.0
Other Eurasia	166,110	172,960	179,170	176,530	182,594	3.4
Azerbaijan	9,420	10,540	12,530	11,330	11,621	2.6
Kazakhstan	17,180	17,990	16,560	16,240	18,600	14.5
Turkmenistan	42,800	48,040	50,330	50,140	52,396	4.5
Ukraine	33,950	30,930	34,340	35,540	32,992	-7.2
Uzbekistan	41,680	42,270	42,080	41,460	44,031	6.2
Others	21,080	23,190	23,330	21,820	22,954	5.2
Other Europe	20,700	21,060	21,380	19,710	25,213	27.9
Bulgaria	3,190	2,980	2,770	2,860	3,375	18.0
Romania	11,410	11,910	12,310	10,760	15,642	45.4
Others	6,100	6,170	6,300	6,090	6,196	1.7
Total world	3,728,649	3,896,352	3,996,177	3,946,789	4,100,226	3.9
<i>of which</i>						
OPEC	522,947	534,782	545,710	545,413	558,074	2.3
<i>OPEC percentage</i>	<i>14.0</i>	<i>13.7</i>	<i>13.7</i>	<i>13.8</i>	<i>13.6</i>	
OECD	1,742,404	1,824,969	1,872,169	1,831,207	1,865,825	1.9

General notes

Definitions

Barrels per calendar day (b/cd): the total number of barrels processed in a refinery within 24 hours, reflecting all operational limitations (eg routine inspections, maintenance, repairs etc).

Barrels per stream day (b/sd): the number of barrels of input that a refining facility can process within 24 hours, operating at full capacity under optimal crude and product slate conditions.

Biofuels: transportation fuels derived from biomass include fuel ethanol and biodiesel, whereby these fuels are usually blended with petroleum fuels. Ethanol is an alcohol made by fermenting starch or sugar, notably from (corn) grains and sugar cane. Biodiesel is made primarily from vegetable oils (eg palm oil, soybean oil) or from other oily sources (such as waste cooking grease).

Completion: the installation of permanent equipment for the production of oil or gas.

Composite barrel: a consumption weighted average of retail prices (including taxes) of the main groups of refined petroleum products.

Crude oil: a mixture of hydrocarbons that exists in a liquid phase in natural underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. For statistical purposes, volumes reported as crude oil include:

- liquids technically defined as crude oil;
- small amounts of hydrocarbons that exist in the gaseous phase in natural underground reservoirs, but which are liquid at atmospheric pressure after being recovered from oil well (casing head) gas in lease separators;
- small amounts of non-hydrocarbons produced with the oil;
- very heavy and extra-heavy crude oils with viscosity less than 10,000 mPa-s (centipoises) at original reservoir conditions.

Distillates: middle distillate type hydrocarbons; includes products similar to number one and number two heating oils and diesel fuels. These products are used for space heating, diesel engine fuel and electrical power generation.

Dry hole: a well found to be incapable of producing either oil or gas in sufficient quantities to justify completion as an oil or gas well.

Exports of petroleum products: excludes international air and marine bunkers.

Gasoline: a mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that have been blended to form a fuel suitable for use in internal combustion engines; includes gasoline used in aviation.

Geneva I agreement: agreement of January 1972 between some OPEC Member Countries and the major international oil companies, which had the effect of establishing an index for quarterly adjustments of posted crude oil prices on the basis of the arithmetic average of the deviations of the exchange rates of nine major currencies against the US dollar. This was modified to an import-weighted index in 1978, accounting for exchange rates and inflation rate. The present 'modified Geneva I + US dollar' currency basket includes the US dollar, the Chinese yuan, the Euro, the Indian rupee, the Turkish lira, the Japanese yen, the South Korean won, the UK pound, the Vietnamese dong and the Swiss franc.

Kerosene: medium hydrocarbon distillates in the 150° to 280° C distillation range; used as a heating fuel as well as for certain types of internal combustion engines. Includes jet fuel, which is a fuel of naphtha or of kerosene type, suitable for commercial or military purposes in aircraft turbine engines.

Natural gas liquids (NGLs): those reservoir gases liquefied at the surface in lease separators, field facilities or gas processing plants. NGLs consist of field condensates and natural gas plant products such as ethane, pentane, propane, butane and natural gasoline.

Natural gas: a mixture of hydrocarbon compounds and small quantities of various non-hydrocarbons existing in the gaseous phase or in solution with oil in natural underground reservoirs at reservoir conditions. The natural gas volumes refer to Standard Conditions of 60° F, 14.73 psia (15.6° C, 760 mm/Hg).

Gross production: the total flow of natural gas from oil and gas reservoirs of associated-dissolved and non-associated gas.

Marketed production: corresponds to gross production, minus the volumes of gas flared or re-injected into fields, minus the shrinkage.

Re-injection: the total volume of natural gas produced from oil and gas completions, processed through gas-processing plants and field facilities, and used for gas lift, gas injection and cycling operations.

Shrinkage: volume shrinkage due to purification and/or extraction of natural gas liquids, gas used as input to GTL plants, lease separators plant, own consumption, as well as any other losses caused by spillage, evaporation, etc.

Non-conventional oil: includes synthetic crude oil from tar sands, oil shale, etc, liquids derived from coal liquefaction (CTL) and gas liquefaction (GTL), hydrogen and emulsified oils (eg Orimulsion), non-hydrocarbon compounds added to or blended with a product to modify fuel properties (octane, cetane, cold properties, etc) of substances like alcohols (methanol, ethanol), ethers (such as MTBE (methyl tertiary butyl ether), ETBE (ethyl tertiary butyl ether), TAME (tertiary amyl methyl ether) or esters (eg rapeseed or dimethylester, etc) and chemical compounds such as TML (tetramethyl lead) or TEL (tetraethyl lead) and detergents.

Oil demand: inland delivery, including refinery fuels and losses, as well as products from gas plants, including international air and marine bunkers, as well as direct crude burning.

Oil or gas well: a well completed for the production of oil or gas from one or more zones or reservoirs.

Oil supply: consists of crude oil natural gas liquids and non-conventional oil production.

OPEC Basket: the OPEC Reference Basket (ORB) price was introduced on January 1, 1987. Up to June 15, 2005, it was the arithmetic average of seven selected crudes. These were: Saharan Blend (Algeria); Minas (Indonesia); Bonny Light (Nigeria); Arab Light (Saudi Arabia); Dubai (United Arab Emirates); Tia Juana Light (Venezuela); and Isthmus (Mexico). Mexico is not a Member of OPEC. As of June 16, 2005, the ORB is calculated as a production-weighted average of the OPEC Basket of crudes. These are: Saharan Blend (Algeria); Girassol (Angola, as of January 2007); Djeno (Congo, as of June 2018); Zafiro (Equatorial Guinea, as of May 25, 2017); Rabi Light (Gabon, as of July 1, 2016); Iran Heavy (IR Iran); Basrah Light (Iraq); Kuwait Export (Kuwait); Es Sider (Libya); Bonny Light (Nigeria); Arab Light (Saudi Arabia); Murban (United Arab Emirates); and Merey (Venezuela).

Output of petroleum products: the total amount of petroleum products produced from refinery input in a given period, excluding refinery fuels.

Petroleum products: products obtained from the processing of crude oil, unfinished oils, NGLs and other hydrocarbon compounds. These include aviation gasoline, motor gasoline, naphtha, kerosene, jet fuel, distillate fuel oil, residual fuel oil, liquefied petroleum gas, lubricants, paraffin wax, petroleum coke, asphalt and other products.

Proven crude oil reserves: the estimated quantities of all liquids statistically defined as crude oil. They consist of those quantities of crude oil which by analysis of geoscience and engineering data can be estimated with reasonable certainty to be commercially recoverable, from a given date forward, from known reservoirs and under defined economic conditions, operating methods and government regulations (*source: SPE — Petroleum Resources Management System*).

Proven natural gas reserves: are the estimated quantities of all hydrocarbons statistically defined as natural gas. They consist of those quantities of natural gas (associated and non-associated) which by analysis of geoscience and engineering data can be estimated with reasonable certainty to be commercially recoverable, from a given date forward, from known reservoirs and under defined economic conditions, operation methods and government regulations (*source: SPE — Petroleum Resources Management System*).

Refinery capacity (charge): the input (feed) capacity of refinery processing facilities.

Refinery capacity (operable): the maximum amount of input to atmospheric distillation units that can be processed in an average 24-hour period.

Refinery throughput: oil input into an atmospheric distillation unit.

Residual fuel oil: fuels obtained as liquid still bottoms from the distillation of crude used alone or in blends with heavy liquids from other refinery process operations. It is used for the generation of electric power, space heating, vessel bunkering and various industrial purposes.

Rig: a derrick complete with engine-house and other equipment necessary for drilling oil and gas wells.

Well (exploratory and development): a hole drilled for the purpose of finding or producing crude oil or natural gas, or providing services related to the production of crude oil and natural gas.

Country groupings

(OPEC Member Countries are shown in bold.)

OECD Americas: Chile, Canada, Mexico and United States.

OECD Europe: Austria, Belgium, Czech Republic, Denmark (including Faroe Islands), Estonia, Finland, France (including Andorra and Monaco), Germany, Greece, Hungary, Iceland, Ireland, Italy (including San Marino and the Holy See), Latvia, Lithuania, Luxembourg, Netherlands, Norway (including Svalbard and Jan Mayen Islands), Poland, Portugal, Slovakia, Slovenia, Spain (including Canary Islands), Sweden, Switzerland (including Liechtenstein), Turkey and United Kingdom.

OECD Asia Pacific: Australia, Japan, Korea (Republic of), New Zealand and Other OECD Asia Pacific.

China: People's Republic of China.

India: India

Other Asia: Afghanistan, American Samoa, Bangladesh, Bhutan, Brunei, Cambodia, Canton and Enderbury Islands, China Hong Kong Special Administrative Regions (SAR), China Macau SAR, Cook Islands, Fiji, French Polynesia, Guam, Indonesia, Kiribati, Korea (Democratic People's Republic of), Lao People's Democratic Republic, Malaysia, Maldives, Micronesia Federated States of, Mongolia, Myanmar, Nauru,

General Notes

Nepal, New Caledonia, Niue, Pakistan, Papua New Guinea, Philippines, Samoa, Singapore, Solomon Islands, Sri Lanka, Thailand, Tonga, Tuvalu, Vanuatu, Vietnam, and Other Asia.

Latin America: Antigua, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Federation of St Kitts and Nevis, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Nicaragua, Panama (including Panama Canal Zone), Paraguay, Peru, St Lucia, St Vincent, Suriname, Trinidad & Tobago, Uruguay, **Venezuela** and Other Latin America.

Middle East: Bahrain, **Islamic Republic of Iran**, **Iraq**, Jordan, **Kuwait**, Lebanon, Oman, Qatar, **Saudi Arabia**, Syrian Arab Republic, **United Arab Emirates (UAE)** (Abu Dhabi, Ajman, Dubai, Fujairah, Ras al-Khaimah, Sharjah, Umm al-Qaiwain) and Yemen.

Africa: **Algeria**, **Angola**, Benin, Botswana, British Indian Ocean Territory, Burkina Faso, Burundi, Cameroon (United Republic of), Cape Verde, Central African Republic, Chad, Comoros, **Congo**, Congo (Democratic Republic of the), Djibouti, Egypt, **Equatorial Guinea**, Eritrea, Eswatini, Ethiopia, **Gabon**, Gambia (The), Ghana, Guinea, Guinea-Bissau, Côte d'Ivoire, Kenya, Lesotho, Liberia, **Libya**, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, **Nigeria**, Reunion, Rwanda, St Helena, São Tomé and Príncipe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Sudans (including South Sudan and Sudan), Tanzania, Togo, Tunisia, Uganda, Western Sahara, Zambia and Zimbabwe.

Russia: Russian Federation.

Other Eurasia: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

Other Europe: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Gibraltar, Malta, Montenegro, the Republic of North Macedonia, Romania and Serbia.

Organization of the Petroleum Exporting Countries (OPEC): Algeria (1969), Angola (2007), Congo (2018), Equatorial Guinea (2017), Gabon (1975–95, rejoined OPEC in 2016), the Islamic Republic of Iran (1960), Iraq (1960), Kuwait (1960), Libya (1962), Nigeria (1971), Saudi Arabia (1960), United Arab Emirates (1967), Venezuela (1960).

Organization for Economic Co-operation and Development (OECD): Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States and Other OECD.

Abbreviations

Symbols:

na Not available/not applicable.

Currencies:

\$	US dollar	XAF	Central African Franc (Congo, Gabon and Equatorial Guinea)	LYD	Libyan dinar
€	Euro	IRR	Iranian rial	NGN	Nigerian naira
		IQD	Iraqi dinar	SAR	Saudi Arabian riyal
DZD	Algerian dinar	KWD	Kuwaiti dinar	AED	United Arab Emirates dirham
AOA	Angolan new kwanza			VES	Bolívar soberano

Miscellaneous:

b	barrel(s)	dwt	deadweight tonnage	mb	million barrels
b/d	barrels per day	fob	free on board	NCV	net calorific value
b/cd	barrels per calendar day	ft	feet	NCF	non-conventional
b/sd	barrels per stream day	GDP	gross domestic product	NOC	national oil company
b/yr	barrels per year	GTL	gas to liquids	NGLs	natural gas liquids
bn	billion	LHS	left-hand side	RHS	right-hand side
bn b	billion barrels	LNG	liquefied natural gas	s cu m	standard cubic metres
cif	cost, insurance and freight	LPG	liquefied petroleum gas	t	tonne
cu m	cubic metres	m	million	tr	trillion

Rounding: In all tables totals may not add up due to independent rounding.

Balance of import-export tables may not match due to independent assessments and usage of various secondary sources.

Selected oil companies

ADCO	Abu Dhabi Company for Onshore Oil Operations	NOC	National Oil Corporation (Libya)
ADMA	Abu Dhabi Marine Areas	NODCO	National Oil Distribution Company (Qatar)
ADMA-OPCO	Abu Dhabi Marine Operating Company	NPHR	New Port Harcourt Refinery
ADNOC	Abu Dhabi National Oil Company	Oasis	Oasis Oil Company of the Libya, Inc
ADOC	Abu Dhabi Oil Company	Occidental	Occidental Petroleum Corporation
Agip	Agip SpA	OMV	OMV Aktiengesellschaft
Agoco	Arabian Gulf Oil Company (Libya)	PDVSA	Petroleos de Venezuela SA
Amerada Hess	Amerada Hess Corporation	Perenco	
AOC	Arabian Oil Company	Pertamina	Perusahaan Pertamina Minyak Dan Gas Bumi Negara
Aramco	Saudi Arabian Oil Company (Saudi Aramco)	PetroChina	PetroChina Co, Ltd
Arco	Atlantic Richfield Company	Petroecuador	National oil company of Ecuador
Asamera	Asamera Oil	Petroindustrial	Refinery operations company of Ecuador
Ashland	Ashland Oil	Petromer Trend	Petromer Trend Corporation
BP	BP plc	Petromin	General Petroleum and Mineral Organization of Saudi Arabia
Braspetro	Petrobras Internacional SA	Petroproduccion	Exploration and production oil company of Ecuador
Brega Marketing	Brega Petroleum Marketing Company	Phillips	Phillips Petroleum Company
Buttes	Buttes Gas & Oil Company	PPMC	Pipeline and Products Marketing Company (Nigeria)
Calasiatic	Calasiatic Petroleum Company	QGPC	Qatar General Petroleum Corporation (now Qatar Petroleum)
Caltex (PT)	PT Caltex Pacific Indonesia	Royal Dutch/Shell	Royal Dutch Petroleum Company, The Netherlands, and Shell Transport and Trading Co, UK
ChevronTexaco	ChevronTexaco Corporation	SNP	China Petroleum & Chemical Corporation
Conoco	Continental Oil Company	SNPC	Société Nationale des Pétroles du Congo
Corpoven	Corpoven SA	Sonangol	Sociedade Nacional de Combustíveis de Angola
DPC	Dubai Petroleum Company	Sonatrach	Société Nationale de Transport et de Commercialisation des Hydrocarbures
EGPC	Egyptian General Petroleum Corporation	Stancal	Standard Oil Company of California
ENOC	Emirates National Oil Company (UAE)	PT Stanvac	PT Stanvac Indonesia
ExxonMobil	ExxonMobil Corporation	Tenneco	Tenneco Incorporated
GASCO	Abu Dhabi Onshore Gas Company	Tesoro	Tesoro Indonesia Petroleum Corporation
Getty	Getty Oil Corporation	Topco	Texas Overseas Petroleum Company
GOC	Gabon Oil Company	TOT	TotalEnergies SE
Gulf	Gulf Oil Corporation	Total	Total
Hispanoil	Hispanica de Petroleos SA	Union Oil	Union Oil Company of California
INOC	Iraq National Oil Company	VLO	Valero Energy Corporation
Inpex	Indonesia Petroleum Ltd	VOO	Veba Oil Operations (Libya)
JORC	Jeddah Oil Refinery Company	Waha Oil	Waha Oil Company (Libya)
KRPC	Kaduna Refinery & Petrochemical Company	Wintershall AG	Warri Refinery & Petrochemical Company
KNPC	Kuwait National Petroleum Company KSC	WRPC	
KOC	Kuwait Oil Company KSC	Zadco	Zakum Development Company
Lagoven	Lagoven SA	ZOC	Zueitina Oil Company (Libya)
Maraven	Maraven SA		
Maxus	Maxus Energy Corporation		
Mobil	Mobil Oil Corporation		
MPC	Marathon Petroleum Corporation		
NIGC	National Iranian Gas Company		
NIOC	National Iranian Oil Company		
NNPC	Nigerian National Petroleum Corporation		

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Conversion factors

Crude oil

Standard factors	Metric tonne	Long ton	Barrels	Cubic metres (kilolitres)
Metric tonne	1	0.984	7.33	1.165
Long ton	1.016	1	7.45	1.128
Barrels	0.136	0.134	1	0.159
Cubic metres (kilolitres)	0.858	0.887	6.289	1

By country *(lb/tonne)*

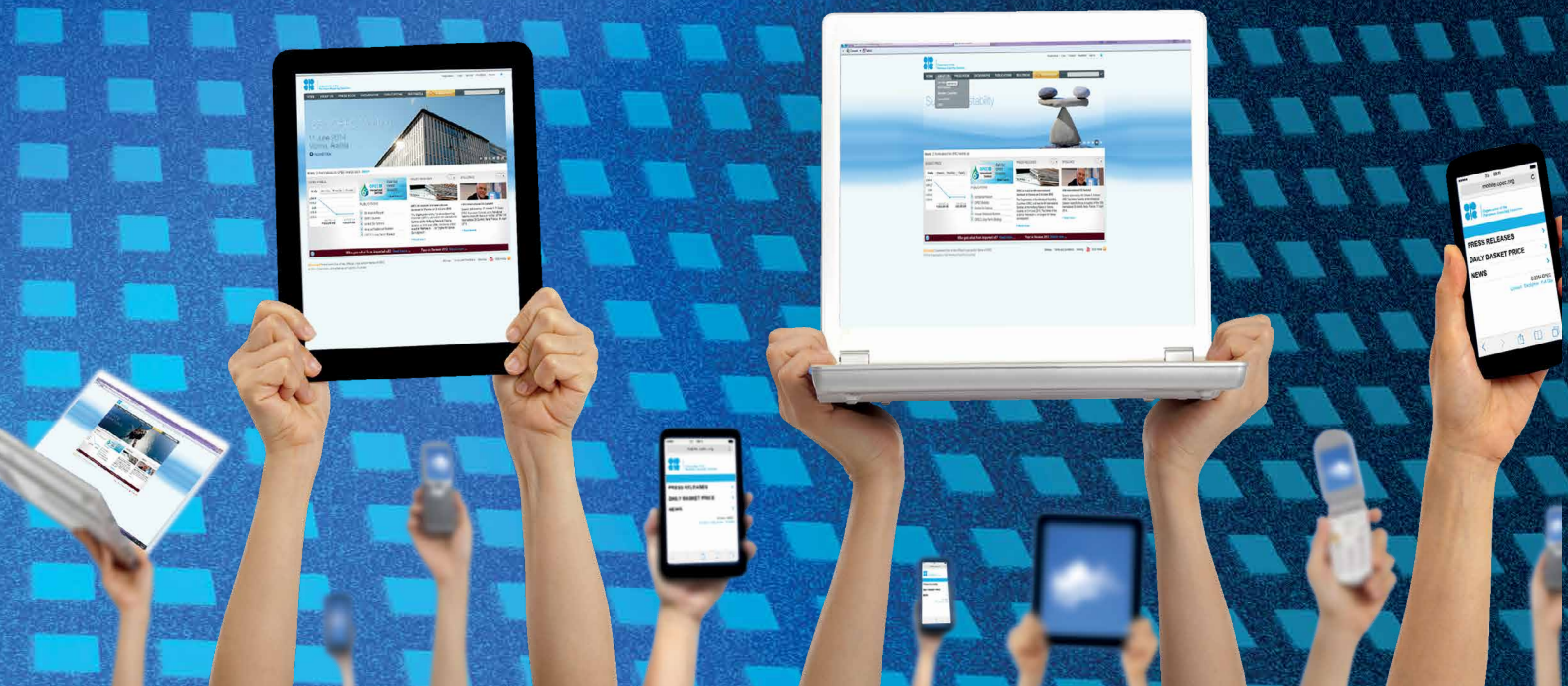
Algeria	8.052
Angola	7.370
Congo	7.113
Equatorial Guinea	7.190
Gabon	7.442
IR Iran	7.382
Iraq	7.379
Kuwait	7.170
Libya	7.570
Nigeria	7.368
Saudi Arabia	7.323
United Arab Emirates	7.565
Venezuela	6.656
OPEC	7.362

Petroleum products *(lb/tonne)*

Gasoline	8.4998
Kerosene	7.7652
Distillates	7.2296
Residuals	6.6208

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