

**ENERGY** 

nternational crude oil prices increased remarkably in 1386. Rising demand for oil in China and India, fall in the excess capacity of production, reduction in inventory levels of crude oil and gasoline in the U.S., political and military tensions in the Middle East and Nigeria, continuation of Iran's peaceful nuclear issue, hurricane in the Caribbean Sea, and depreciation of US dollar against other hard currencies were among factors responsible for the run-up in crude oil prices.

OPEC, in its September 11<sup>th</sup>, 2007 Conference, decided to increase the volume of crude supplied to the market by Member Countries (excluding Iraq and Angola) by 500 thousand b/d, effective as of November 1<sup>st</sup>, 2007. This decision was taken to maintain oil market stability. In the 147<sup>th</sup> Meeting of OPEC Conference held in Vienna on Bahman 13<sup>th</sup>, 1386 (February 1<sup>st</sup>, 2008), the Conference agreed that the current OPEC production is sufficient to meet the expected demand.

## **OPEC**

### **Primary Energy Consumption**

Primary energy consumption by the OPEC Member Countries rose from 658 million tons oil equivalent in 2006 to 680 million tons oil equivalent in 2007. Among primary energy carriers, oil and natural gas are consumed by Member Countries significantly, whereas hydroelectricity and coal are used by Iran, Venezuela, and Indonesia sparingly. Middle East Members (Saudi Arabia, Iran, Kuwait, United Arab Emirates, and Oatar), with a total consumption of 459.3 million tons oil equivalent, had a higher amount of consumption as compared with other members (Venezuela, Indonesia, and Algeria). Iran ranked first with 182.9 million tons oil equivalent, followed by Saudi Arabia with 167.6 million tons oil equivalent.

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	Oil	Natural gas	Coal	Nuclear energy	Hydroelectricity	Total
Middle East Members	216.4	237.7	1.1	0	4.1	459.3
Saudi Arabia	99.3	68.3	0	0	0	167.6
Iran	77.0	100.7	1.1	0	4.1	182.9
Kuwait	14.0	11.3	0	0	0	25.3
United Arab Emirates	22.0	38.9	0	0	0	60.9
Qatar	4.1	18.5	0	0	0	22.6
Other members	93.2	78.0	28.5	0	21.0	220.7
OPEC	309.6	315.7	29.6	0	25.1	680.0

Source: BP Statistical Bulletin, 2008

(1) Excludes Iraq, Libya, Nigeria, and Angola.

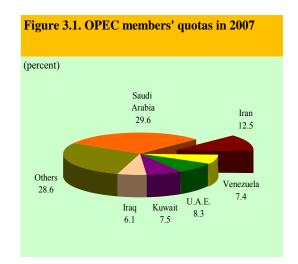
### **Crude Oil Reserves**

OPEC crude oil reserves edged down by 0.1 percent to 934.7 billion barrels in 2007. Out of 12 OPEC Member Countries, the largest reserves belong to Saudi Arabia, with 264.2 billion barrels, followed by Iran, with 138.4 billion barrels, and Iraq and Kuwait, with 115 and 101.5 billion barrels, respectively.

### **Crude Oil Production**

In the review year, average OPEC crude oil production, with 1.0 percent fall, reached 35.2 mb/d as compared with the previous year. This was to prevent the downward trend in crude oil prices. In this year, production of OPEC Middle East Members, with 1.3 percent decline, reached 23.7 mb/d and production of other members reached 11.5 mb/d, down by 0.4 percent.

The highest amount of production was related to Saudi Arabia, with a share of 29.6 percent and a production of 10.4 mb/d.



	(billion barrels)						
				Percentag	Percentage change O		ercent)
	2005	2006	2007	2006	2007	2006	2007
Middle East Members	742.9	744.9	744.3	0.3	-0.1	79.6	79.6
Saudi Arabia	264.2	264.3	264.2	0	0	28.3	28.3
Iran	137.5	138.4	138.4	0.7	0	14.8	14.8
Iraq	115.0	115.0	115.0	0	0	12.3	12.3
Kuwait	101.5	101.5	101.5	0	0	10.9	10.9
United Arab Emirates	97.8	97.8	97.8	0	0	10.5	10.5
Qatar	26.9	27.9	27.4	3.7	-1.7	3.0	2.9
Other members	183.2	190.4	190.4	3.9	0	20.4	20.4
OPEC	926.1	935.3	934.7	1.0	-0.1	100.0	100.0

Source: BP Statistical Bulletin, 2008

	OP	(thou	sand b/d)				
				Percentage change		Share (percent)	
	2005	2006▲	2007	2006	2007	2006	2007
Middle East Members	23,705	24,003	23,697	1.3	-1.3	67.5	67.3
Saudi Arabia	11,114	10,853	10,413	-2.3	-4.1	30.5	29.6
Iran	4,359	4,388	4,401	0.7	0.3	12.3	12.5
Iraq	1,833	1,999	2,145	9.1	7.3	5.6	6.1
Kuwait	2,618	2,682	2,626	2.4	-2.1	7.5	7.5
United Arab Emirates	2,753	2,971	2,915	7.9	-1.9	8.4	8.3
Qatar	1,028	1,110	1,197	8.0	7.8	3.1	3.4
Other members	11,633	11,557	11,509	-0.7	-0.4	32.5	32.7
OPEC	35,338	35,560	35,206	0.6	-1.0	100.0	100.0

Source: BP Statistical Bulletin, 2008

(1) Includes NGL, shale oil, and oil sands.

# **OPEC Production Ceiling**<sup>(1)</sup>

As of February 1<sup>st</sup>, 2007, OPEC pro-duction ceiling remained at 25.8 mb/d. In the 142<sup>nd</sup> Meeting of the OPEC Conference held in Vienna on September 11<sup>th</sup>, 2007, the Conference decided to increase the volume of crude supplied to the market by OPEC Member Countries (excluding Iraq and Angola) by 500,000 b/d, effective November 1<sup>st</sup>, 2007. This was in line with achieving stability in the global oil market. At its 146<sup>th</sup> Meeting in Abu Dhabi on December 5<sup>th</sup>, 2007, OPEC agreed to keep output levels unchanged. Additionally, the group assigned production quotas to recently joined members (Angola and Ecuador) by 1.9 mb/d and 520,000 b/d, respectively. In its 147<sup>th</sup> and 148<sup>th</sup> Meetings held on February 1<sup>st</sup>, 2008, and March 5<sup>th</sup>, 2008, respectively, the Conference decided to maintain OPEC production levels unchanged.

#### **OPEC Production Quota**

		(thous	and b/d)
	February 2007 <sup>(1)</sup>	November 2007 <sup>(1)</sup>	January 2008 <sup>(2)</sup>
Saudi Arabia	8,399	8,943	8,943
Iran	3,788	3,817	3,817
Other members	13,613	14,493	16,913
Production ceiling	25,800	27,253 <sup>(3)</sup>	29,673

Source: www.opec.org

(1) Excludes Iraq, Angola, and Ecuador.

(2) Excludes Iraq.

(3) The output ceiling was determined according to an increase of 500,000 b/d in the OPEC production quota (except for Angola and Iraq) in August 2007.

#### **Oil Consumption**

In 2007, average oil consumption in OPEC Member Countries <sup>(2)</sup> grew by 3.7 percent to 6.6 mb/d. The highest amount of consumption was related to Saudi Arabia by 2.2 mb/d, and the lowest to Qatar by 0.1 mb/d. Iran's consumption was 1.6 mb/d, accounting for 24.5 percent of total OPEC consumption <sup>(3)</sup>.

<b>OPEC Oil Consumption</b> <sup>(1)</sup>						(thou	isand b/d)
				Percenta	Percentage change		percent)
	2005	2006▲	2007	2006	2007	2006	2007
Middle East Members	4,212.3	4,402.9	4,595.1	4.5	4.4	69.0	69.4
Saudi Arabia	1,890.6	2,005.4	2,153.6	6.1	7.4	31.4	32.5
Iran	1,577.9	1,624.6	1,620.7	3.0	-0.2	25.4	24.5
Kuwait	302.3	274.6	276.0	-9.2	0.5	4.3	4.2
United Arab Emirates	376.5	419.5	450.0	11.4	7.3	6.6	6.8
Qatar	65.0	78.8	94.8	21.2	20.3	1.2	1.4
Other members	2,057.0	1,980.8	2,023.0	-3.7	2.1	31.0	30.6
OPEC <sup>(2)</sup>	6,269.3	6,383.7	6,618.1	1.8	3.7	100.0	100.0

Source: BP Statistical Bulletin, 2008

(1) Includes domestic demand for oil, aviation and navy fuel, fuel for refineries and oil wastes.

(2) Excludes Iraq, Nigeria, Libya, and Angola.

OPEC output ceiling and quota for Member Countries apply to crude oil only and exclude condensates and liquids.

<sup>(2)</sup> Excludes Iraq, Nigeria, Libya, and Angola.

<sup>(3)</sup> Estimations by the BP are more than those published by the Ministry of Petroleum.

### **Natural Gas Proven Reserves**

OPEC natural gas proven reserves amounted to 91.2 trillion cubic meters in 2007, showing one percent increase compared with the previous year. Iran, with 27.8 and Qatar with 25.6 trillion cubic meters, have the largest reserves among Member Countries.

# **Production of Natural Gas**<sup>(1)</sup>

In 2007, OPEC natural gas production increased by 3.8 percent to 537.8 billion cubic meters. Iran had the lion's share of OPEC natural gas production by 111.9 billion cubic meters, accounting for 20.8 percent of total OPEC production. Algeria, with a production of 83 billion cubic meters of natural gas and a share of 15.4 percent, ranked second.

## **Consumption of Natural Gas**

In 2007, OPEC consumption of natural gas amounted to 350.7 billion cubic meters, up by 2.3 percent compared with the year before. Consumption of natural gas by Middle East Members reached 264 billion cubic meters, indicating 3 percent increase compared with 2006 and constituting 75.3 percent of total consumption.

	OPEC	(trillion cubic meters)					
				Percentage change O		Share (percent)	
	2005	2006	2007	2006	2007	2006	2007
Middle East Members	70.8	71.4	71.7	1.0	0.4	79.1	78.6
Saudi Arabia	6.8	7.1	7.2	4.4	1.4	7.9	7.9
Iran	27.5	27.6	27.8	0.4	0.7	30.6	30.5
Iraq	3.2	3.2	3.2	0.9	0	3.5	3.5
Kuwait	1.6	1.8	1.8	14.5	0.2	2.0	2.0
United Arab Emirates	6.1	6.1	6.1	0	-0.3	6.8	6.7
Qatar	25.6	25.6	25.6	0	-0.1	28.3	28.1
Other members	17.8	18.9	19.5	5.9	3.2	20.9	21.4
OPEC <sup>(1)</sup>	88.6	90.3	91.2	2.0	1.0	100.0	100.0

Source: BP Statistical Bulletin, 2008

(1) Excludes Angola.

	OPE	(billion cubic meters)					
				Percentage	Percentage change O		percent)
	2005▲	2006	2007	2006	2007	2006	2007
Middle East Members	277.2	293.1	309.4	5.7	5.6	56.6	57.5
Saudi Arabia	71.2	73.5	75.9	3.2	3.3	14.2	14.1
Iran	100.9	108.6	111.9	7.6	3.0	21.0	20.8
Kuwait	12.3	12.9	12.6	4.9	-2.3	2.5	2.3
United Arab Emirates	47.0	47.4	49.2	0.9	3.8	9.2	9.1
Qatar	45.8	50.7	59.8	10.7	17.9	9.8	11.1
Other members	218.7	224.9	228.4	2.8	1.5	43.4	42.5
OPEC <sup>(1)</sup>	495.9	518.0	537.8	4.5	3.8	100.0	100.0

Source: BP Statistical Bulletin, 2008

(1) Excludes Iraq and Angola.

(1) Includes commercial production and consumed gas.

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<b>OPEC Natural Gas Consumption</b> <sup>(1)</sup>							(billion cubic meters)	
			Percentage change		Share (percent)			
	2005 🛦	2006▲	2007	2006	2007	2006	2007	
Middle East Members	245.9	256.4	264.0	4.3	3.0	74.8	75.3	
Saudi Arabia	71.2	73.5	75.9	3.2	3.3	21.4	21.8	
Iran	102.4	108.7	111.8	6.2	2.9	31.7	31.9	
Kuwait	12.3	12.9	12.6	4.9	-2.3	3.8	3.6	
United Arab Emirates	41.3	41.7	43.2	1.0	3.6	12.2	12.4	
Qatar	18.7	19.6	20.5	4.8	4.6	5.7	5.9	
Other members	84.0	86.5	86.7	3.0	0.2	25.2	24.7	
OPEC	329.9	342.9	350.7	3.9	2.3	100.0	100.0	

Source: BP Statistical Bulletin, 2008

(1) Excludes Iraq, Nigeria, Libya, and Angola.

### Iran

#### **Production and Export of Crude Oil**

Based on the data released by the Ministry of Petroleum, in 1386, Iran's average crude oil production, in adherence to the quotas set by the OPEC, amounted to 4.1 mb/d. Average crude oil export grew by 2 percent to 2.5 mb/d; however, exports of oil products, with 25.2 percent fall, stood at 199 thousand b/d. Total oil exports (including crude oil and oil products) were reduced by 0.7 percent to 2.7 mb/d. In the review year, crude oil exports had a share of 92.6 percent in total oil exports. The average spot price of each barrel of crude oil export went up by 30.9 percent, compared with 1385, and amounted to \$78.04.

In the review year, the share of Asia in Iran's crude oil export was 61.9 percent of which, 18.6 percent was related to Japan and 43.3 percent to other Asian countries and the Far East. The shares of Europe and Africa in Iran's crude oil export were 32.4 and 5.7 percent, respectively. In this year, the average price of major oil products (except for gasoline) remained virtually unchanged at last year levels. Therefore, each liter of gas oil was sold at Rls. 165, kerosene Rls. 165, and fuel oil Rls. 94.5. The price of each liter of gasoline, however, increased from Rls. 800 to Rls. 1,000 in Khordad 1386.

Domestic consumption of oil products reached 1,531 thousand b/d in 1386. Consumption of gas oil and gasoline amounted to 525 and 362 thousand b/d, respectively, constituting 34.3 and 23.6 percent of total consumption of oil products.

### **Natural Gas**

In 1386, with the development of gas supply systems in urban and rural areas, domestic consumption of natural gas increased by 11.6 percent to 122.5 billion cubic meters. Exports of natural gas reached 5.6 billion cubic metes, down by 1.8 percent.

## Electricity

In 1386, total electricity generation grew by 5.9 percent compared with the previous year, and amounted to 203.8 billion kWh. Of total generated electricity, 190.2 billion kWh (93.3 percent) was related to power plants affiliated to the Ministry of Energy and 13.6 billion kWh (6.7 percent) to other institutions.

The highest amount of electricity was generated by steam power plants, (91.1 billion kWh) while diesel power plants accounted for the lowest amount of generation (0.2 billion kWh). The highest growth in electricity generation belonged to gas and combined cycle power plants by 9.3 percent. The amount of electricity generated by hydroelectric plants was reduced by 1.7 percent, while the amount generated by steam power plants grew by 2.4 percent.

In 1386, consumption of electricity rose by 5.8 percent to 155.6 billion kWh. The highest growth of consumption was related to street lighting by 12.1 percent. Electricity consumption in commercial sector grew by 9.1 percent, in industrial sector 8.7 percent, in public sector 5.7 percent, and in residential sector 4.9 percent. Consumption of electricity in the agriculture sector, however, dropped by 1.2 percent. Residential and industrial sectors had the highest shares in the consumption of electricity by 33.6 and 31.8 percent, respectively.