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## LNG DEVELOPMENTS IN ARAB COUNTRIES: REALITY & FUTURE PROSPECTS

ARAB DEVELOPMENT SUMMIT IN BEIRUT  
SONATRACH- TOTAL ESTABLISHING FIRST  
OF ITS KIND POLYPROPYLENE COMPLEX  
IN ALGERIA



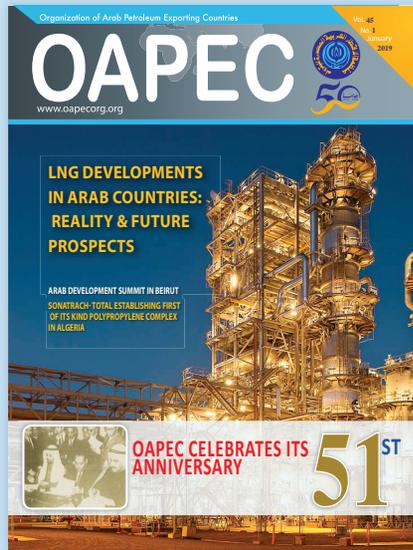
**OAPEC CELEBRATES ITS  
ANNIVERSARY**

# 51<sup>ST</sup>





# The Cover



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# Contents

## IN THIS ISSUE

4

**EDITORIAL**

6

**OAPEC MEMBER COUNTRIES**

12

**OAPEC ACTIVITIES**

20

**PETROLEUM DEVELOPMENTS**

33

**TABLES ANNEX**

## ORGANIZATION OF ARAB PETROLEUM EXPORTING COUNTRIES (OAPEC)



The Organization of Arab Petroleum Exporting Countries (OAPEC) was founded on the basis of the agreement signed in Beirut, Lebanon on 9 January 1968 between the governments of Kingdom of Saudi Arabia, the State of Kuwait and the (then) Kingdom of Libya. The agreement stipulates that the Organization shall be domiciled in the City of Kuwait.

The principal objective of the Organization is the cooperation of the members in various forms of economic activity in the petroleum industry, the determination of ways and means of safeguarding the legitimate interests of its member countries in this industry, individually and collectively, the unification of efforts to ensure the flow of petroleum to its markets on equitable and reasonable terms, and providing appropriate environment for investment in the petroleum industry in member countries.

In 1970 the United Arab Emirates, the State of Qatar, the Kingdom of Bahrain and the Republic of Algeria joined the Organization, followed by the Syrian Arab Republic and the Republic of Iraq in 1972, Arab Republic of Egypt in 1973, then the Republic of Tunisia in 1982 (its membership was suspended in 1986). Any Arab country which derives a significant share of its national income from petroleum is eligible for membership in OAPEC upon the approval of three-quarters of the member countries, including all three founding members.



## 7 NOGA & ENI SIGN MOU



## 12 OAPEC CELEBRATES ITS 51<sup>ST</sup> ANNIVERSARY



## 16 ARAB DEVELOPMENT SUMMIT IN BEIRUT

### • OAPEC-Joint Ventures:

OAPEC has sponsored the creation of four companies: The Arab Maritime Petroleum Transport Company (AMPTC), established in 1972 with headquarters in Kuwait City, the Arab Shipbuilding and Repair Yard Company (ASRY) established in 1973 with headquarters in Bahrain, the Arab Petroleum Investments Corporation (APICORP) established in 1974 with headquarters in Khobar, Saudi Arabia, the Arab Petroleum Services Company (APSC) established in 1975 with headquarters in Tripoli, Libya.

### OAPEC'S ORGANS

The Organization carries out its activities through its four organs:

- **Ministerial Council:** The Ministerial Council is the supreme authority of the Organization, responsible for drawing up its general policy.
- **Executive Bureau:** The Executive Bureau is composed of one representative from each of the member countries, drawing recommendations and suggestions to the Council, reviewing the Organization's draft annual budget and submitting it to the Council, it also adopts the regulations applicable to the staff of the General Secretariat. The resolutions of the Executive Bureau are issued by the majority of two-thirds of all members.
- **General Secretariat:** The General Secretariat of OAPEC plans, administers, and executes the Organization's activities in accordance with the objectives stated in the agreement and directives of the Ministerial Council. The General Secretariat is headed by the Secretary General. The Secretary General is appointed by resolution of the Ministerial Council for a tenor of three years renewable for similar period(s). The Secretary General is the official spokesman and legal representative of the Organization and is accountable to the Council. The Secretary General directs the Secretariat and supervises all aspects of its activities, and is responsible for the tasks and duties as directed by the Ministerial Council. The Secretary General and all personnel of the Secretariat carry out their duties in full independence and in the common interests of the Organization member countries. The Secretary General and the Assistant Secretaries General possess in the territories of the Organization members all diplomatic immunities and privileges.
- **Judicial Tribunal:** The protocol of the Judicial Tribunal was signed in Kuwait on 9 May 1978 and came into effect on 20 April 1980. The Tribunal is competent to consider all disputes related to the interpretation and application of OAPEC's establishment agreement, as well as disputes arising between two or more member countries concerning petroleum operations.



## LNG DEVELOPMENTS IN ARAB COUNTRIES: REALITY & FUTURE PROSPECTS

Since its launch over five decades ago, the LNG industry attracted special attention from OAPEC member countries, the industry's cradle as the first global LNG shipment was exported in Algeria in 1964. Many other Arab countries followed accentuating their vital role in the industry.

LNG trade witnessed an accelerating growth competing with the conventional natural gas trade via pipelines. Currently, LNG trade forms two thirds of the world's natural gas trade. This has been enhanced by the growing global demand for LNG as estimates predict global LNG demand to exceed 500 million tons/year by 2035 against 300 million tons/year in 2017.

LNG also boosted natural gas importing countries to diversify their supply resources and avoid absolute reliance on regional gas imported via pipelines, which help achieving their energy security.

Over long decades, OAPEC members have contributed to providing global markets with secure and reliable LNG supplies. They have underscored their pioneer role in this industry through executing a chain of mega projects worldwide in terms of production and investments. This has been based on these countries' potentials like large gas reserves, infrastructure, proximity to global markets, and most importantly the genuine will of their policy and decision makers to achieve the most ideal exploitation of their natural gas resources. Data show that Arab countries' exports formed about 36% of the total global trade in 2017: Qatar tops the global LNG production list with a capacity of about 77 million tons/year. Qatar and Algeria come first and second respectively in terms of LNG exports to Europe.

On another note, Arab LNG exporting countries are facing various challenges, most importantly a supply boom

in global markets following the operation of new projects in Australia, Russia, in addition to the USA's entry as a major player to the LNG industry. This has led to more pressure on prices, as it is expected that the current jump of supplies would lead to a surplus in supply until 2023. It is worth mentioning that the Arab countries' share has slightly dropped in global markets.

It is expected that a gap will happen between supply and demand post-2023 in light of projections on a continued growth in the global LNG demand exceeding supplies due to current decline in executing new projects as international companies have adopted a cautious approach to new investments in expensive projects like liquefaction.

In spite of all these challenges, OAPEC member countries look the most prepared players to lead the global LNG scene beyond 2023 through their announced mega gas liquefaction projects including Qatar's plans to increase its exporting capacity from 77 million to 110 million tons/year by 2023; UAE ADNOC and Saudi Aramco's signing of a MoU on exploring potential cooperation opportunities in natural gas and LNG; Bahrain's work to launch its first LNG floating terminal; and Algeria's signing of many contracts on exportation and building of more LNG units.

While observing current LNG developments in OAPEC members, the Secretariat General lauds the good results achieved in this aspect and hopes the global economic situation would improve so that its members can inject more investments in this sector. OAPEC also calls for more cooperation between Arab countries, especially OAPEC members, in the oil and gas industry, LNG in particular, due its huge and promising prospects in supporting their national economies.



## SAUDI ARABIA ANNOUNCES RISE IN OIL RESERVES

The Saudi Ministry of Energy, Industry, and Mineral Resources recently announced a rise in its crude oil and natural gas reserves after they were independently audited by consultants DeGolyer and MacNaughton (D&M) in Aramco’s concession.

On 31 December 2017, KSA announced that its oil and gas reserves were 266.3 billion barrels of oil and 307.9 trillion scf. of gas (out of which 260.9 billion barrels of oil and 302.3 trillion scf. gas estimated as fixed proven oil and gas reserves in Aramco concession). However, following the auditing, reserves in Aramco’s concession rose by 2.2 billion barrels (the equivalent of 263.1 billion barrels of oil and 319.5 trillion scf. of gas).

In addition to these reserves, the audit added Saudi Arabia’s share of the oil reserves in the jointly owned fields with Kuwait: with a Saudi share of 5.4 billion barrels (for onshore and offshore fields), in addition to 5.6 trillion scf. of gas resources.

Therefore, following the audit, Saudi

Arabia’s proven oil reserves stood at around 268.5 billion barrels of oil and 325.1 trillion standard cubic feet of gas as of the end of 2017.

Saudi Energy Minister HE Eng. Khalid Al Falih said the auditing highlighted three important facts:

These huge reserves are among the least costly worldwide, backed by KSA’s leading of global abundance

Co2 emissions from Aramco’s oil production and gas flaring are among the lowest worldwide calling upon the petroleum industry around the world to adopt these environmental standards along with profitability

This is a recognition of KSA’s observation of integrity and environmental excellence for Aramco’s work and staff.

The minister added “This certification proves why every barrel KSA produces is the most profitable in the world and why we believe Saudi Aramco is indeed the world’s most valuable and important company.”

## NOGA & ENI SIGN MOU



A Memorandum of Understanding (MOU) has been signed between the National Oil and Gas Authority of the Kingdom of Bahrain (NOGA) and Italy's Eni on 13 January 2019 to pursue petroleum exploration of Block 1, an offshore area of over 2,800km<sup>2</sup>, situated in the northern territorial water of Bahrain with a depth ranging from 10 m up to 70 m. The area is still largely unexplored. The MOU was concluded by HE Sheikh Mohammed bin Khalifa Al Khalifa, Minister of Oil, and Eni's Chief Executive Claudio Descalzi.

HE Al Khalifa said that the strategic partnership with Eni is a major positive step towards utilizing the Kingdom's offshore natural resources and that with this signing, the aim is to hold various discussions to review all relevant aspects of the technical and commercial terms of the potential exploration and development within a reduced timeframe.

He underscored that NOGA pays huge attention to boosting relations with all international oil companies to secure Bahrain's energy needs to sustain its economic growth and achieve its 2030 vision.



## SONATRACH- TOTAL ESTABLISHING FIRST OF ITS KIND POLYPROPYLENE COMPLEX IN ALGERIA



**HE MUSTAPHA GUITOUNI**  
MINISTER OF ENERGY, ALGERIA

An agreement between Algeria's Sonatrach and the French group Total was signed for the creation of a joint venture for the realization of a polypropylene complex in Algeria named Sonatrach Total Polymer Enterprise (STEP), owned 51% by Sonatrach and 49% by Total.

This petrochemical project, situated in Arzew near Oran, includes a propane dehydrogenation plant (PDH) and a polypropylene production unit (PP) with a capacity of 550,000 tons per year. It will contribute to securing the domestic polypropylene demand (currently imported) and will create various new job opportunities.

## IRAQ & JORDAN TO BOOST ENERGY COOPERATION



Iraqi Deputy PM for Energy Affairs and Oil Minister HE Thamir Al Ghadhban held talks with Jordan's Energy Minister HE Hala Zawati to discuss ways to boost bilateral cooperation in the oil, gas, and electricity sectors.

In a press statement following the meeting, HE Al Ghadhban said Iraq was keen on boosting energy relations with Jordan. He added that the talks were fruitful and the outcome will be seen soon on technical and economic levels.

The Minister explained that the details of a project to extend a pipeline to export crude oil from the Rumaila area in the southern Iraqi province of Basra to the Jordanian port of Aqaba were discussed. The supply of the Iraqi oil pipeline was discussed in accordance with a memorandum of understanding that will be signed later after obtaining the approval of the governments of the two countries. Also, ways to enhance the prospects of cooperation to extract oil and gas and renewable energy as well as an electricity project between the two countries were addressed.

The Jordanian minister on her part said



her visit to Iraq comes within the framework of boosting bilateral relations between the two countries, and as a follow up to the visits of His Majesty the King and HE the Prime Minister of Jordan, to discuss issues of mutual interest in energy, oil and gas. She stressed the importance of boosting economic and technical cooperation between the two countries to serve their interests. She hoped that the talks would accelerate the execution of joint ventures between the two countries after agreeing their measures and technical mechanisms.



**H.E. ENG. TAREK EL-MOLLA**  
 MINISTER OF PETROLEUM AND  
 MINERAL RESOURCES, EGYPT

## NOTABLE INCREASE IN EGYPT’S OIL AND GAS RESERVES IN 2018

Egypt’s Ministry of Petroleum and Mineral Resources announced on its official website that the country has made 61 new oil and gas discoveries in 2018 (43 crude oil and 18 natural gas discoveries). The discoveries contributed to boosting Egypt’s petroleum reserves and production.

The Ministry said that Egypt’s crude oil and condensates production is 660,000 barrels per day currently, as 36 new exploration wells were added to production map. Around 100,000 b/d of crude were added to production through production enhancement activities to compensate for the naturally declining production of old wells, and 27,000 b/d were added through newly-discovered oil fields that started production in 2018. Egypt added 113,000 b/d of crude oil to production due to 175 development wells.

The Ministry explained that the new projects contributed to the country’s self-sufficiency of natural gas, which is one of the most important successes of the strategy, adding that four major Egyptian gas fields in the Mediterranean were put on the production map, which led to halting LNG imports for the first time in 3 years. This has led to rationalizing of the use of foreign currency allocated for importing, as well as, reducing the burden on the government’s budget.

# ORGANIZATION OF ARAB PETROLEUM EXPORTING COUNTRIES (OAPEC)



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# OAPEC CELEBRATES ITS ANNIVERSARY

# 51<sup>ST</sup>



OAPEC celebrated its 51st anniversary on 9 January 2019. The Organization was established by an agreement signed in Beirut on 9 January 9 1968 by the Kingdom of Saudi Arabia, Kuwait, and Libya (Kingdom of Libya at that time). The three founding members chose the State of Kuwait for the Organizations' domicile and headquarters.

By 1982 the membership of the Organization increased to eleven Arab oil exporting countries namely: Algeria (1970), Bahrain (1970) (now Kingdom of Bahrain), Egypt (1973), Iraq (1972), Kuwait (1968), Libya (1968), Qatar (1970), Kingdom of Saudi Arabia (1968), Syria (1972), Tunisia (1982) and United Arab Emirates (1970). In 1986, Tunisia submitted its membership withdrawal request from the Organization.



OAPEC Secretary General HE Abbas Al Naqi said in a press statement on the occasion that the establishment of OAPEC was a historical turning point in the progress of the Arab joint action. The organization works on strengthening the cooperation between its members to achieve common interests and economic benefits. For this end, a number of joint ventures were established including: the Arab Maritime Petroleum Transport Company (AMPTC) in 1972 in Kuwait; Arab Shipbuilding and Repair Yard Company (ASRY) in 1973 in Bahrain; Arab Petroleum Investments Corporation (APICORP) in 1974 in Khobar (KSA); Arab Petroleum Services Company (APSCO) in 1975 in Tripoli (Libya); and the Arab Petroleum Training Institute (APTI) in 1978 in Baghdad (Iraq).

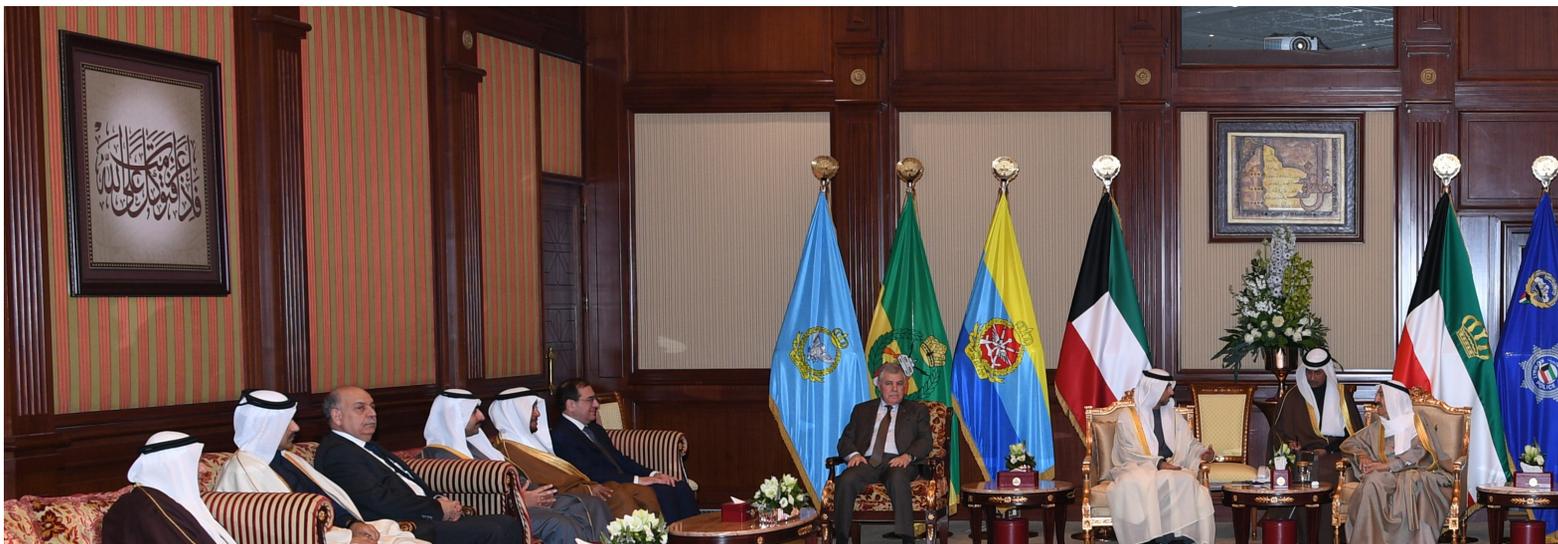
These companies have contributed to boosting the progress of the Arab petroleum sector through executing joint or individual petroleum projects and funding petroleum projects in many Arab member and non-member countries alike.

HE Al Naqi added that the principal objective of OAPEC is the cooperation of the members

in various forms of economic activity in the petroleum industry; the realization of the closest ties among them in this field; the determination of ways and means of safeguarding the legitimate interests of its members in the industry, individually and collectively; the unification of efforts to ensure the flow of petroleum to its consumption markets on equitable and reasonable terms; and the creation of suitable climate for the capital and expertise invested in the petroleum industry in the member countries.

He clarified that in pursuit of the said objectives, OAPEC shall in particular:

- Take adequate measures for the coordination of the petroleum economic policies of its members.
- Take adequate measures for the harmonization of the legal systems in force in the member countries to the extent necessary to enable the Organization to carry out its activity.
- Assist members to exchange information and expertise and provide training and employment opportunities for citizens of



member countries where such possibilities exist.

- Promote cooperation among members in working out solutions to problems facing them in the petroleum industry.
- Utilize the member countries' resources and common potentialities in establishing joint projects in various phases of petroleum industry such as may be undertaken by all the members of those of them that may be interested in such projects.

The Secretary General also underscored OAPEC's endeavors to strengthen its contacts and ties with institutions outside the Arab world so as to present an Arab perspective on energy and development. It also explores possibilities of cooperation among its members. The Organization also fosters contacts that facilitate access to new scientific and technological developments in the field of energy.

HE Al Naqi added that OAPEC prepares specialized technical and economic reports on the latest developments in the petroleum industry and their implications for the member countries. He revealed that OAPEC releases on average around 8-10 studies a year.

As for environment, HE Al Naqi said that the Secretariat General monitors ongoing developments on the UNFCCC, Kyoto Protocol and the Paris Agreement on Climate Change as



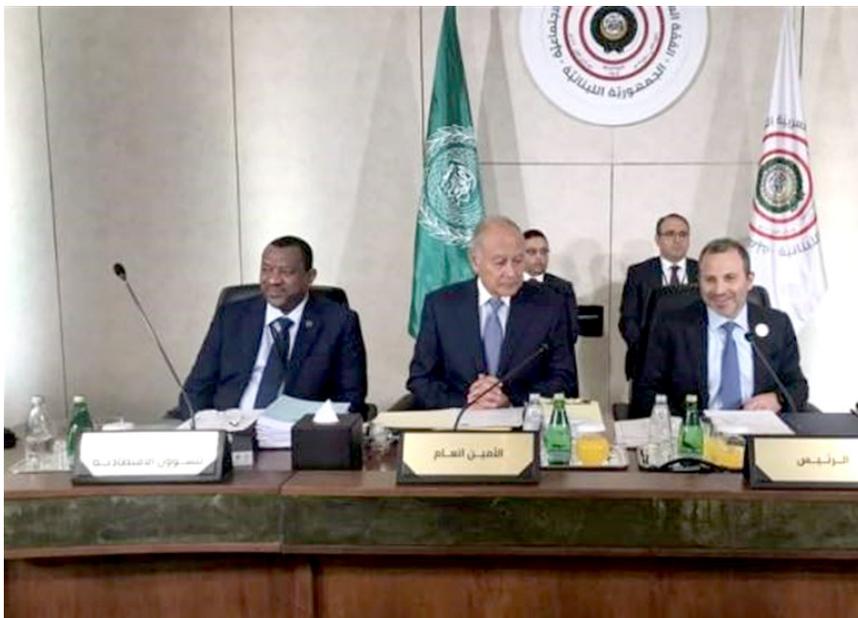
per the directives of OAPEC Council of Ministers. This is in order to clarify the member countries' stances over these issues with a continued cooperation with the Arab Negotiating Group, LAS, OPEC, and the GCC. Co-ordination meetings are usually organised with these entities to discuss draft-resolutions and topics under negotiation to impede any resolutions that might cause harm to the member countries' interests and economies. He added that OAPEC Secretariat General took part in the recent 24th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP-24) in Katowice, Poland, in December 2018. He clarified that on the side-lines of COP24, OAPEC Secretariat General organised an important seminar, in collaboration with the Saudi Ministry of Energy, Industry, and Mineral Resources, on "Using Modern Technology to Cut CO2 Emissions". A group of speakers from KSA, Bahrain, and Kuwait presented the seminar in the presence of a group of the Parties' experts and negotiators.

HE Al Naqi concluded his statement by expressing gratitude to OAPEC member countries for their significant support that enabled the Organisation to carry out its mission. He also thanked all OAPEC bodies including the Ministerial Council, Executive Bureau, Secretariat General, and Judicial Tribunal for their sincere efforts in the smooth flow of the Organisation's work.





## ARAB DEVELOPMENT SUMMIT IN BEIRUT



OAPEC Secretary General HE Abbas Al Naqi took part in the opening of the 4th Round of The Arab Development Summit: Economy and Society, on 20 January 2019 in Beirut, Lebanon, in the presence of their Excellencies Heads of State and senior officials in Arab specialized organisations.

HE Al Naqi stated that the Summit is an important official Arab event that aims at boosting cooperation among Arab countries in the various economic and developmental sectors. He underscored OAPEC's keenness on taking part in this event ever since it was first launched. He also lauded the Summits' outcome and recommendations.

## OAPEC ANNUAL STATISTICAL REPORT 2018 RELEASED

OAPEC Secretariat General released its Annual Statistical Report for the Year 2018 including data on Arab member and non-member countries, as well as, total energy data of OPEC members and the world from 2013 to 2017.

The report has been updated according to OAPEC Energy Data Form and country papers presented to the 11th Arab Energy Conference held in Marrakesh, Morocco, on 1-4 October 2018. Data issued by Arab national institutions have been used too.

The report reviews various issues as its first section presents general indicators of OAPEC member countries. Section two tackles data on reserves, production, and new discoveries. It is worth mentioning that Arab conventional crude oil reserves by the end of 2017 were estimated at about 714.4 billion barrels, representing a decline of about 0.2% compared to 2016. Arab crude oil reserves were estimated at about 48.9% of the world's total reserves of 1460.8 billion barrels.

Arab natural gas reserves slightly declined in 2017 compared to 2016 by 0.4% reaching 54.2 trillion cubic meters, representing 27.5% of the world's reserves.

Arab countries' crude oil and NGL production reached about 28.6 million barrels/day in 2017, out of which 27.5 million b/d produced by OAPEC members. Arab countries' crude oil production alone reached 24.3 million barrels per day, down by 1.1% compared to 2016, and representing about 28.5% of the global production. Marketed natural gas production in the Arab countries reached 583.4 billion cubic meters in 2017, out of which OAPEC members claimed about 549.3 billion cubic meters, representing 94.1% of the Arab countries' production. Arab countries' combined production accounted for about 15.8% of the world's production of 3685 billion cubic meters.

As for exploration, Arab countries made about 93 new discoveries in 2017, including 63 oil discoveries, and 30 natural gas discoveries. Out of these discoveries, 91 new discoveries were in OAPEC members (63 oil and 28 gas).

Section three of the report tackled oil and natural gas processing. Design capacities of existing oil refineries in the Arab countries reached about 7832.6 thousand b/d in 2017 with a drop of 67.8 thousand b/d compared to 2016. Arab countries'



petroleum products production reached about 7635.3 thousand b/d, representing a decline of 0.2% compared to 2016.

Section four highlights oil and energy consumption in the Arab member and non-member countries, including the consumption of: oil, petroleum products according to product type, natural gas, coal, and hydroelectricity. Total energy consumption in the Arab countries in 2017 reached about 14.7 million BOE/d, including 7.21 million BOE/d of crude oil and petroleum products, and about 7.23 BOE/d of natural gas.

Section five focuses on oil and natural gas trade in the Arab member and non-member countries. It includes data on exports and imports of crude oil, petroleum products, and natural gas.

As for prices, section six tackles average spot prices of Arab and world crudes, OPEC basket spot prices, and energy products prices in local currencies and the US dollar from 2015 to 2018.

Moreover, the report highlights oil and gas transportation in terms of the number and tonnage of oil tankers, and pipeline networks available in the member countries. It also introduces some general economic indicators and data on electricity in the Arab countries.



## STUDY ON FUTURE PROSPECTS FOR OIL DEMAND IN ASIAN COUNTRIES

A recently launched study by OAPEC under the title “Future Prospects for Oil Demand in Asian Countries” projected a rise in oil demand in developing Asian countries between 2020 and 2040 at a rate of 1.5% annually from 23.9 million barrels to 32.2 million barrels per day. The study revealed that according to current policies, it is expected that oil demand will increase by an average of 2% per year to reach 636.1 million barrels of oil equivalent/day in 2040 compared to 24.3 million barrels in 2020.

The study added that China will continue to top the energy demand growth list between 2020 and 2040 both regionally and globally as energy consumption is projected to rise at a rate of 0.8% annually as per the new policies and 1.4% as per current policies.

According to the study, energy consumption in developing Asian countries has grown three folds from 28.1 million boe/d in 2000 to 88.2 million barrels in 2016. These countries’ share in the world’s energy consumption has doubled from 15.4% to 33.1%. Coal is the main source that meets these countries’ economies’ energy needs as its importance increased from 50% in 2000 to 55.7% in 2016. These countries’ share in coal consumption globally has also risen from 31.5% to 65.6% and China has become the world’s and region’s largest coal consumer with a doubled share from 22.4% in 2000 to 50.8% in 2016. India came second as its share of global coal consumption jumped from 7.7% to 16.8%.



On developing Asian countries’ oil consumption, the study indicated a hike of 4.9% from 10.4 million barrels/day in 2000 to 22.5 million barrels in 2016. Their consumption has risen from one barrel in 16 in 2000 to one barrel in 8 barrels in 2016 as China’s consumption rose at a rate of 6.2% annually from 4.9 million b/d to 12.8 million b/d.

The study pointed out that India’s oil consumption has risen at a rate of 4.4% annually from 2.6 million b/d in 2000 to 4.5 million b/d in 2016, with its global share rising from 2.9% to 4.6%.

## APICORP PROVIDES \$100M FUNDING FOR OMAN'S DUQM REFINERY



The Arab Petroleum Investments Corporation (Apicorp) has announced a \$100 million-investment as part of a consortium of international and regional banks to finance the construction of Oman's Duqm Refinery.

Situated within the Duqm Special Economic Zone, the refinery is a joint venture between Kuwait Petroleum International and Oman Oil Company.

Duqm Refinery is a milestone project which will contribute to the transformation of Oman's economy.

Apicorp's contribution to the refinery project includes \$50 million as sharia-compliant finance, while the other \$50 million is in conventional

tranche. This is also a demonstration of Apicorp's commitment to Oman with over \$380 million currently committed to the energy sector in country.

"We are delighted to be working with Kuwait Petroleum International and Oman Oil Company on this prestigious project - Duqm Refinery. As the Arab energy sectors most trusted financial partner, we look forward to further strengthening our existing partnerships with the governments of Kuwait and Oman," remarked Apicorp CEO Dr Ahmed Ali Attiga.

"Once operational, the refinery will play a significant role in boosting Oman's exports and will be a key driver for the growth of the region providing investment opportunities for new related projects," he stated.

## DR LEILA BENALI APPOINTED CHIEF ECONOMIST AT APICORP

The Arab Petroleum Investments Corporation (APICORP), an OAPEC joint venture, has appointed energy and commodities strategy and policy expert, Dr Leila Benali, as the Chief Economist at APICORP. Dr Benali joined from Saudi Aramco where she handled energy policy and gas strategy. Throughout her career, she successfully managed several high-value projects, and spearheaded strategy and policy formulation for governments, energy companies, industrials and institutional investors. Dr Benali has also served as a Director at IHS CERA (Cambridge Energy Research Associates), now IHSMarkit, and has also worked for Schlumberger. She taught energy courses in universities and is an active member of several energy associations.





## Petroleum Developments in the World Market and Member Countries\*

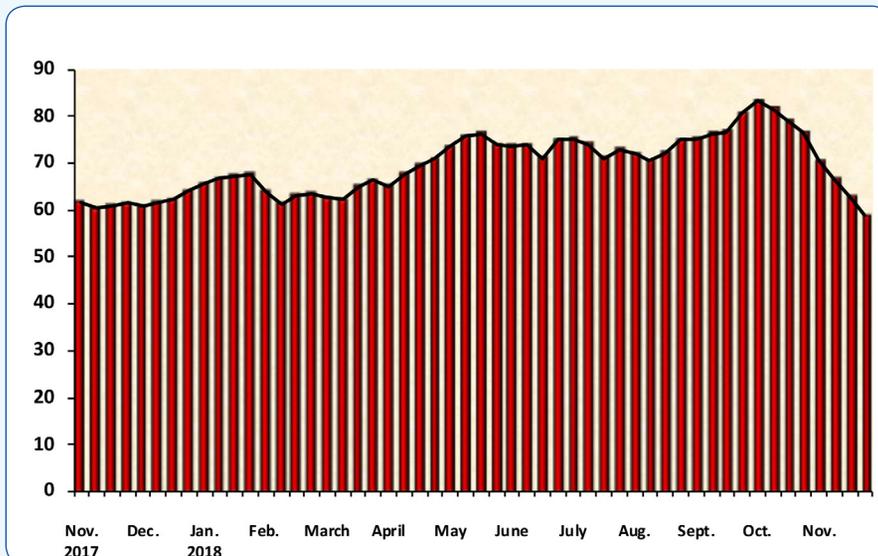
### 1. Oil Market

#### 1. Prices

##### 1-1 Crude Oil Prices

Weekly average price of OPEC basket decreased during the first week of November 2018, to reach \$70.5/bbl, and continue to decline thereafter to reach its lowest level of \$58.8/bbl during the fourth week, as shown in **figure 1**:

**Figure - 1** Weekly Average Spot Price of the OPEC Basket of Crudes 2017 - 2018 (\$/bbl)



On monthly basis, OPEC Reference Basket in November 2018, experienced its largest monthly fall since January 2015, averaged \$65.3/bbl, representing a decrease of \$14.1/bbl or 17.7% comparing with previous month, and an increase of \$4.6/bbl or 7.6% from the same month of previous year. Growing concerns over global oil supply overhang, expectations of lower global oil demand growth, weaker global economic data particularly in the Euro-Zone, China and India, as well as a strong US dollar and weaker refinery margins, were major stimulus for the decrease in oil prices during the month of November 2018 to reach its lowest level since March 2018.

#### Key Indicators

- In November 2018, **OPEC Reference Basket decreased** by 17.7% or \$14.1/bbl from the previous month level to stand at \$65.3/bbl.
- **World oil demand** in November 2018, **increased** by 0.1% or 0.1 million b/d from the previous month level to reach 101.2 million b/d.
- **World oil supplies** in November 2018, **increased** by 0.1% or 0.1 million b/d from the previous month level to reach 101.5 million b/d.
- **US tight oil production** in November 2018, **increased** by 1.5% to reach about 7.9 million b/d, whereas **US oil rig count decreased** by 39 rig from the previous month level to stand at 871 rig.
- **US crude oil imports** in October 2018, **decreased** by 4.3% from the previous month level to reach 7.5 million b/d, and **US product imports decreased** by 21% to reach about 2 million b/d.
- **OECD commercial inventories** in November 2018 **increased** by 1 million barrels from the previous month level to reach 2873 million barrels, whereas **Strategic inventories** in OECD-34, South Africa and China **decreased** by 6 million barrels from the previous month level to reach 1835 million barrels.
- **The average spot price of natural gas** at the Henry Hub **increased** in November 2018 to reach \$4.09/million BTU.
- **The Price of Japanese LNG imports** in October 2018 **increased** by \$0.3/m BTU to reach \$10.9/m BTU, and the **Price of Korean LNG increased** by \$0.4/m BTU to reach 11.1/m BTU, whereas **the Price of Chinese LNG imports remained stable** at the same previous month level of \$8.5/m BTU.
- **Arab LNG exports to Japan and Korea** were about 1.961 million tons in October 2018 (a share of 13.1% of total imports).

\* Prepared by the Economics Department.

Table (1) and figure (2) show the change in the price of the OPEC basket versus last month and the corresponding month of last year:

	Nov. 2017	Dec.	Jan. 2018	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.
OPEC Basket Price	60.7	62.1	66.9	63.5	63.8	68.4	74.1	73.2	73.3	72.3	77.2	79.4	65.3
Change From previous Month	5.2	1.3	4.8	-3.4	0.3	4.7	5.7	-0.9	0.1	-1.0	4.9	2.2	-14.1
Change from same month of previous Year	17.5	10.4	14.5	10.1	13.4	17.1	24.9	28.0	26.4	22.7	23.7	23.9	4.6

\* Effective June 16, 2005 OPEC replaced its seven-crude basket with one comprised of eleven crudes, one from each member country (weighted according to production and exports to major markets). Effective 1 January and mid of October 2007, Angola's Girassol and Ecuadorian Oriente crudes have been incorporated to become the 12th and 13th crudes comprising the new OPEC Basket. As of Jan., 2009, the basket excludes the Indonesian crude. As of Jan. 2016, the basket price includes the Indonesian crude. As of July 2016, the basket price includes the Gabonese crude. As of Jan. 2017, the basket excludes the Indonesian crude. As of June 2017, the basket price includes the Equatorial Guinean crude "Zafiro". As of June 2018, the basket includes the Congolese crude "Djeno".

**Figure - 2** Change in the Price of the OPEC Basket of Crudes, 2017-2018 (\$/bbl)

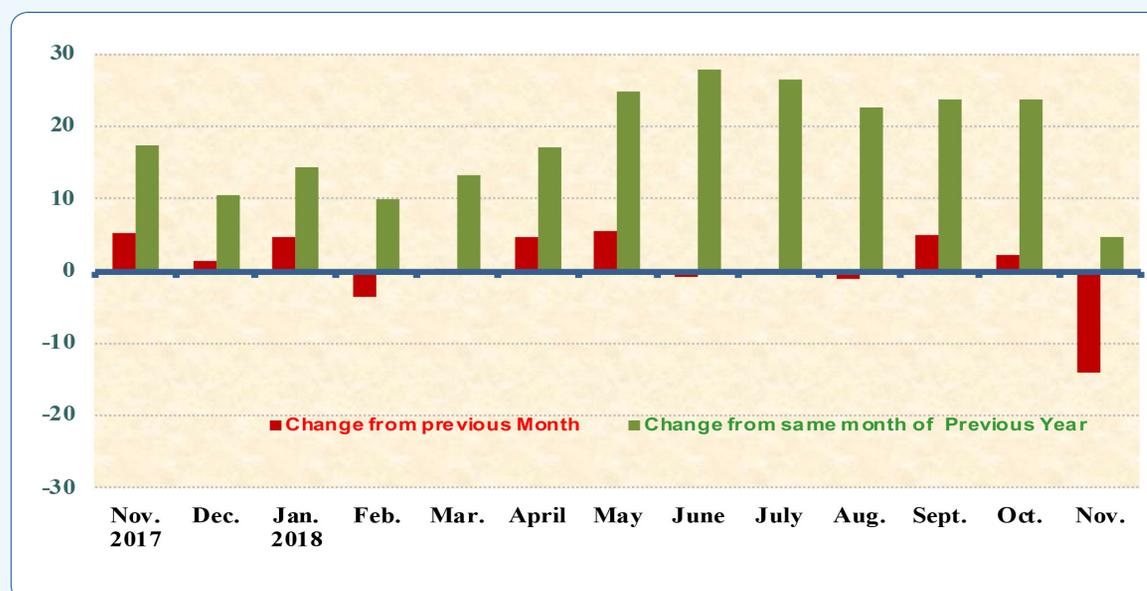


Table (3) in the annex show spot prices for OPEC basket and other crudes for the period 2016-2018.

## 1-2 Spot Prices of Petroleum Products

### - US Gulf

In November 2018, the spot prices of premium gasoline decreased by 20.8% or \$18.6/bbl comparing with their previous month levels to reach \$71/bbl, spot prices of gas oil decreased by 14.3% or \$13.3/bbl to reach \$80/bbl, and spot prices of fuel oil decreased by 14% or \$9.7/bbl to reach \$59.5/bbl.



**- Rotterdam**

The spot prices of premium gasoline in November 2018, decreased by 15.8% or \$14.4/bbl comparing with their previous month levels to reach \$76.8/bbl, spot prices of gas oil decreased by 11.1% or \$10.8/bbl to reach \$86.4/bbl, and spot prices of fuel oil decreased by 14.4% or \$10.5/bbl to reach \$62.6/bbl.

**- Mediterranean**

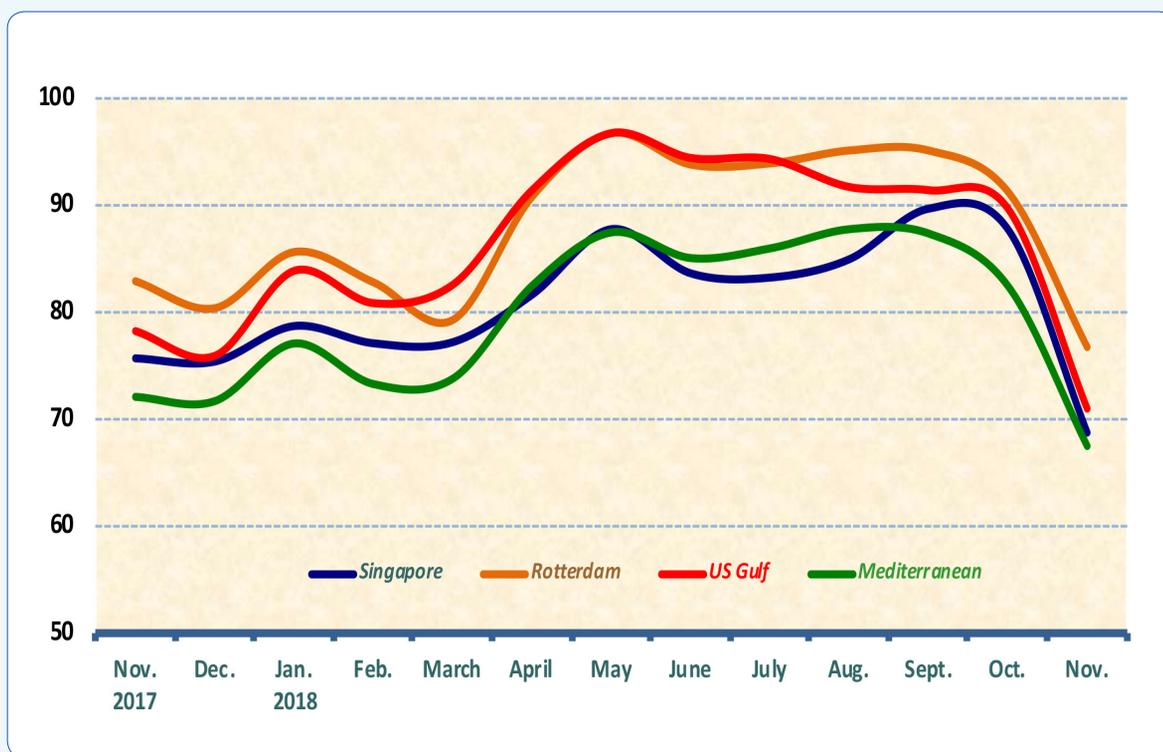
The spot prices of premium gasoline decreased in November 2018, by 18.2% or \$15/bbl comparing with previous month levels to reach \$67.5/bbl, spot prices of gas oil decreased by 12.1% or \$11.7/bbl to reach \$85.1/bbl, and spot prices of fuel oil decreased by 13.2% or \$9.8/bbl to reach \$64.5/bbl.

**- Singapore**

The spot prices of premium gasoline decreased in November 2018, by 21.6% or \$18.9/bbl comparing with previous month levels to reach \$68.7/bbl, spot prices of gas oil decreased by 15.3% or \$14.8/bbl to reach \$82.1/bbl, and spot prices of fuel oil decreased by 11.1% or \$8.5/bbl to reach \$68.3/bbl.

**Figure (3)** shows the price of Premium gasoline in all four markets from November 2017 to November 2018.

**Figure - 3** Monthly Average Spot Prices of Premium Gasoline, 2017-2018 (\$/bbl)



**Table (4)** in the annex shows the average monthly spot prices of petroleum products, 2016-2018.

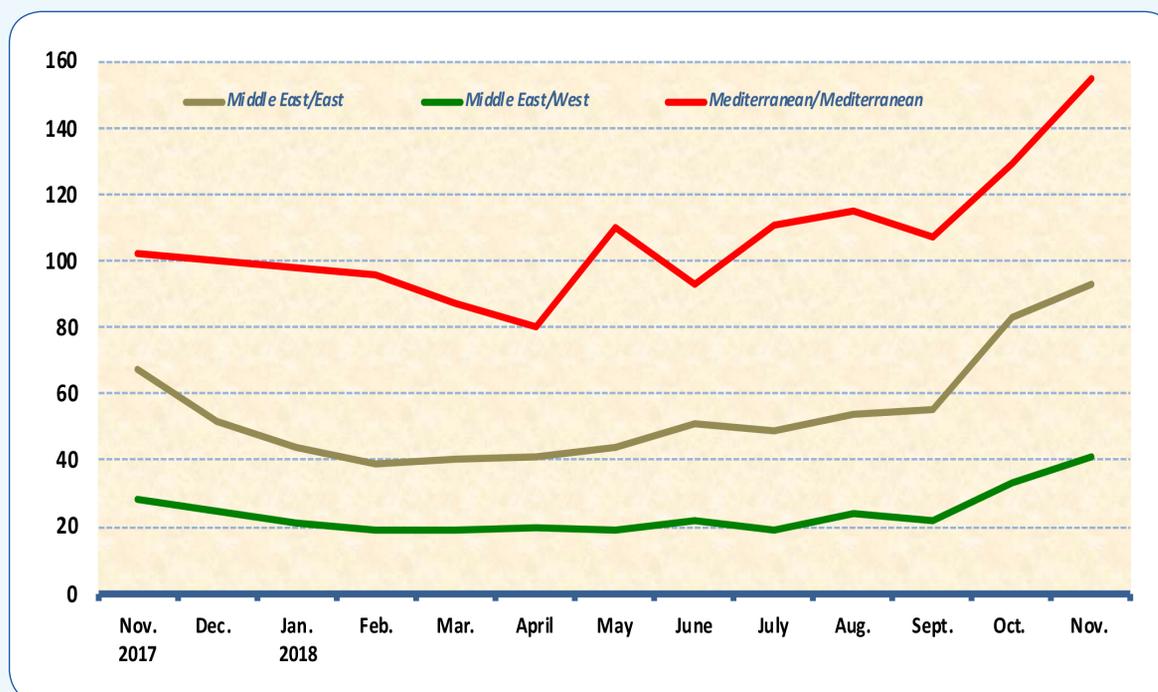
### 1-3 Spot Tanker Crude Freight Rates

In November 2018, Freight rates for crude oil for tanker size (230-280 thousand deadweight tons (dwt)), leaving Middle Eastern ports to the East, increased by 10 points or 12% comparing with previous month to reach 93 points on the World Scale (WS\*).

And freight rates for crude oil for tanker size (270-285 thousand deadweight tons (dwt)), leaving Middle Eastern ports to the West, increased by 8 points or 24.2% comparing with previous month to reach 41 points on the World Scale (WS), freight rates for inter - Mediterranean for small to medium sized tankers (80-85 thousand deadweight tons (dwt)), increased by 26 points or 20.2% comparing with previous month to reach 155 points on the World Scale (WS).

**Figure (4)** shows the freight rates for crude oil to all three destinations from November 2017 to November 2018.

**Figure - 4 Monthly Spot Crude Oil Tanker Freight Rates, 2017 -2018** (World Scale)\*



\* World Scale is a method for calculating freight prices. One point for the WS means 1% of the standard price of freight in the direction in the WS book, which is published annually by the World Scale Association. The book contains a list of prices in the form of US dollar per ton, called "World Scale 100," for all the major routes in the world.

### 1-4 Spot Tanker Product Freight Rates

In November 2018, monthly spot Tanker freight rates for petroleum products [for tanker size 30-35 thousand deadweight tons (dwt)], leaving Middle Eastern ports to the East, increased by 8 points, or 6.5% comparing with previous month to reach 132 points on WS.



And Freight rates for Petroleum Products across Mediterranean [for tanker size 30-35 thousand deadweight tons (dwt)], increased by 14 points, or 9.3% comparing with previous month to reach 164 points on WS, freight rates for petroleum products [for tanker size 30-35 thousand deadweight tons (dwt)], leaving Mediterranean to North-West Europe increased by 10 points, or 6.2% comparing with previous month to reach 172 points on the World Scale (WS).

**Figure (5)** shows the freight rates for oil products to all three destinations from November 2017 to November 2018.

**Figure - 5**

**Monthly Spot Product Tanker Freight Rates, 2017 -2018**

(World Scale)



**Table (5)** and **(6)** in the annex show crude and products Tankers Freight Rates, 2016-2018.

## 2. Supply and Demand

Preliminary estimates in November 2018 show an increase in world oil demand by 0.1% or 0.1 million b/d, comparing with the previous month level to reach 101.2 million b/d, representing an increase of 1.1 million b/d from their last year level.

Demand in OECD countries increased by 2.1% or 1 million b/d, comparing with the previous month level to reach 48.7 million b/d, representing an increase of 0.2 million b/d from their last year level. Whereas demand in Non-OECD countries decreased by 1.7% or 0.9 million b/d comparing with their previous month level to reach 52.5 million b/d, representing an increase of 0.9 million b/d from their last year level.

On the supply side, preliminary estimates show that world oil supplies for November 2018 increased by 0.1% or 0.1 million b/d, comparing with the previous month to reach 101.5 million b/d, representing an increase of 2.5 million b/d from their last year level.

In November 2018, OPEC crude oil and NGLs/condensates total supplies decreased by 0.5% or 0.2 million b/d, comparing with the previous month to reach 39.2 million b/d, representing a decrease of 0.3 million b/d from their last year level. Whereas preliminary estimates show that Non-OPEC supplies increased by 0.3% or 0.5 million b/d, comparing with the previous month to reach 62.3 million b/d, representing an increase of 2.8 million b/d from their last year level.

Preliminary estimates of the supply and demand for November 2018 reveal a surplus of 0.3 million b/d, compared to a surplus of 0.3 million b/d in October 2018 and a shortage of 1.1 million b/d in November 2017, as shown in [table \(2\)](#) and [figure \(6\)](#):

**Table 2** World Oil Supply and Demand (Million b/d)

	November 2018	October 2018	Change from October 2018	November 2017	Change from November 2017
<i>OECD Demand</i>	48.7	47.7	1.0	48.5	0.2
<i>Rest of the World *</i>	52.5	53.4	-0.9	51.6	0.9
<i>World Demand</i>	<b>101.2</b>	<b>101.1</b>	0.1	<b>100.1</b>	<b>1.1</b>
<i>OPEC Supply :</i>	<u>39.2</u>	<u>39.4</u>	<u>-0.2</u>	<u>39.5</u>	<u>-0.3</u>
<i>Crude Oil</i>	32.6	32.8	-0.2	32.9	-0.3
<i>NGLs &amp; Cond.</i>	6.6	6.6	0.0	6.6	0.0
<i>Non-OPEC Supply</i>	60.0	59.7	0.3	57.1	2.9
<i>Processing Gain</i>	2.3	2.3	0.0	2.4	-0.1
<i>World Supply</i>	<b>101.5</b>	<b>101.4</b>	<b>0.1</b>	<b>99.0</b>	<b>2.5</b>
<i>Balance</i>	<b>0.3</b>	<b>0.3</b>		<b>(1.1)</b>	

Source: Energy Intelligence Briefing Dec. 20, 2018.

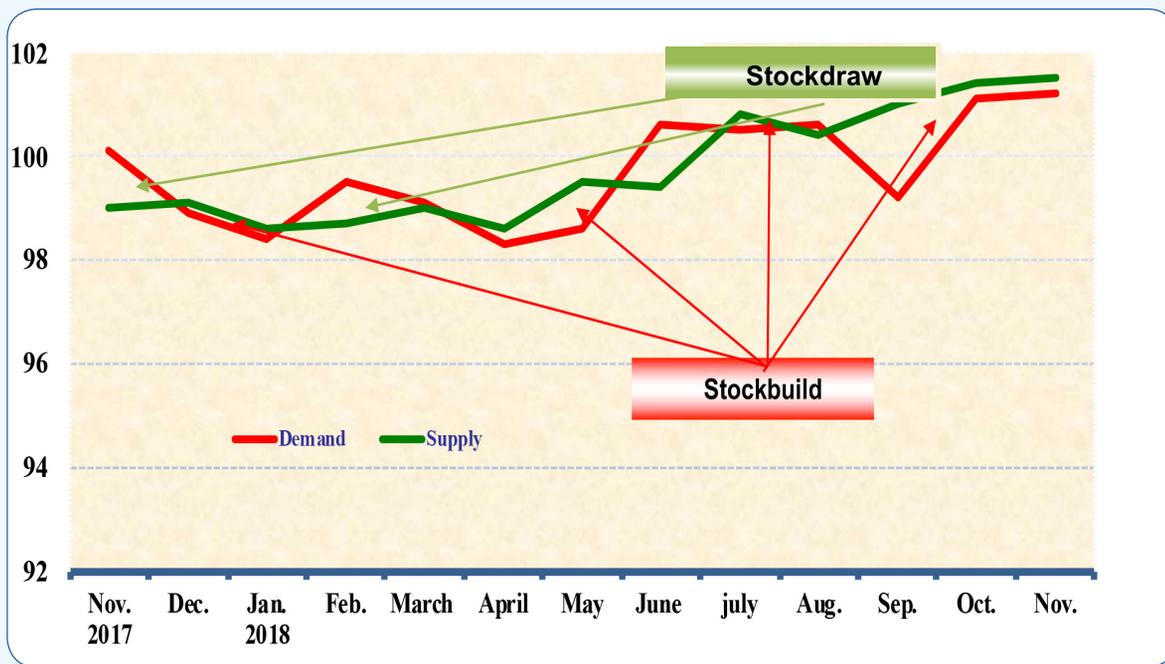
\* include 0.2 million b/d of oil needed to fill up the supply system for crude and products, and strategic reserves.

[Tables \(7\)](#) and [\(8\)](#) in the annex show world oil demand and supply for the period 2016-2018.



**Figure - 6** World Oil Supply and Demand

(Million b/d)



Tables (7) and (8) in the annex show world oil demand and supply for the period 2016-2018.

**US tight oil production**

In November 2018, US tight oil production increased by 117 thousand b/d or 1.5% comparing with the previous month level to reach 7.9 million b/d, representing an increase of 1.4 million b/d from their last year level. The US oil rig count decreased by 39 rig comparing with the previous month level to reach 871 rig, a level that is 18 rig higher than last year, as shown in table (3) and figure (7):

**Table 3** US tight oil production\*

(Million b/d)

	November 2018	October 2018	Change from October 2018	November 2017	Change from November 2017
<i>tight oil production</i>	7.909	7.792	0.117	6.509	1.400
<i>Oil rig count (rig)</i>	871	910	(39)	853	18

Source: EIA, Drilling Productivity Report for key tight oil and shale gas regions, January 2019.

\* focusing on the six most prolific areas, which are located in the Lower 48 states. These six regions accounted for 92% of domestic oil production growth during 2011-2014, Bakken, Eagle Ford, Haynesville, Niobrara, Permian, Appalachia (Utica and Marcellus), in addition to Anadarko region which become the target of many producers in the recent years, as of July 2017, there are 129 operating rigs in the Anadarko region.

**Figure - 7 US tight oil production and oil rig count**



### 3.Oil Trade

#### USA

In October 2018, US crude oil imports decreased by 337 thousand b/d or 4.3% comparing with the previous month level to reach 7.5 million b/d. And US oil products imports decreased by 529 thousand b/d or 21% to reach about 2 million b/d.

On the export side, US crude oil exports increased by 116 thousand b/d or 5.4% comparing with the previous month level to reach 2.3 million b/d, and US products exports increased by 105 thousand b/d or 2% to reach 5.3 million b/d. As a result, US net oil imports in October 2018 were 1.087 thousand b/d or nearly 36.5% lower than the previous month, averaging 1.9 million b/d.

Canada remained the main supplier of crude oil to the US with 46% of total US crude oil imports during the month, followed by Saudi Arabia with 12%, then Mexico with 10%. OPEC Member Countries supplied 35% of total US crude oil imports.

#### Japan

In October 2018, Japan's crude oil imports increased by 170 thousand b/d or 6% comparing with the previous month level to reach 3.1 million b/d. And Japan oil products imports except LPG increased by 68 thousand b/d or 11% comparing with the previous month to reach 676 thousand b/d.

On the export side, Japan's oil products exports decreased in October 2018, by 209 thousand b/d or 33% comparing with the previous month, averaging 418 thousand b/d, the lowest level since October 2017. As a result, Japan's net oil imports in October 2018 increased by 446 thousand b/d or 15.4% to reach 3.3 million b/d.

Saudi Arabia was the big supplier of crude oil to Japan with a share of 41% of total Japan crude oil imports, followed by UAE with 25% and Kuwait with 7% of total Japan crude oil imports.



### China

In October 2018, China’s crude oil imports increased by 101 thousand b/d or 1.1% comparing with the previous month level to reach 9.2 million b/d. And China oil products imports increased by 80 thousand b/d or 6% comparing with the previous month to reach 1.5 million b/d.

On the export side, China oil products exports decreased in October 2018, by 51 thousand b/d or 5% comparing with the previous month, averaging 1 million b/d. As a result, China’s net oil imports in October 2018 increased by 270 thousand b/d or 2.9% to reach 9.6 million b/d, the highest level since January 2018.

Russia was the big supplier of crude oil to China with a share of 16% of total China crude oil imports, followed by Saudi Arabia with 13% and Iraq with 11% of total China crude oil imports.

**Table (4)** shows changes in crude and oil products net imports/(exports) in October 2018 versus the previous month:

**Table 4** USA, Japan and China Crude and Product Net Imports / Exports ( Million bbl/d)

	Crude Oil			oil Products		
	October 2018	September 2018	Change from September 2018	October 2018	September 2018	Change from September 2018
USA	5.253	5.706	-0.453	-3.363	-2.730	-0.633
Japan	3.088	2.918	0.170	0.258	-0.018	0.276
Japan	9.148	9.008	0.140	0.472	0.341	0.131

Source: OPEC Monthly Oil Market Report, various issues 2018.

## 4. Oil Inventories

In November 2018, OECD commercial oil inventories increased by 1 million barrels to reach 2873 million barrels – a level that is 33 million barrels lower than a year ago. It is worth mentioning that during the month, commercial crude inventories in OECD increased by 7 million barrels to reach 1092 million barrels, whereas commercial oil products inventories decreased by 6 million barrels to reach 1781 million barrels.

Commercial oil inventories in Americas decreased by 6 million barrels to reach 1537 million barrels, of which 620 million barrels of crude and 917 million barrels of oil products. And Commercial oil Inventories in Europe decreased by 2 million barrels to reach 923 million barrels, of which 322 million barrels of crude and 601 million barrels of oil products. Whereas Commercial oil inventories in Pacific increased by 9 million barrels to reach 413 million barrels, of which 150 million barrels of crude and 263 million barrels of oil products.

In the rest of the world, commercial oil inventories increased by 22 million barrels to reach 2823 million barrels, whereas the Inventories at sea decreased by 4 million barrels to reach 1217 million barrels.

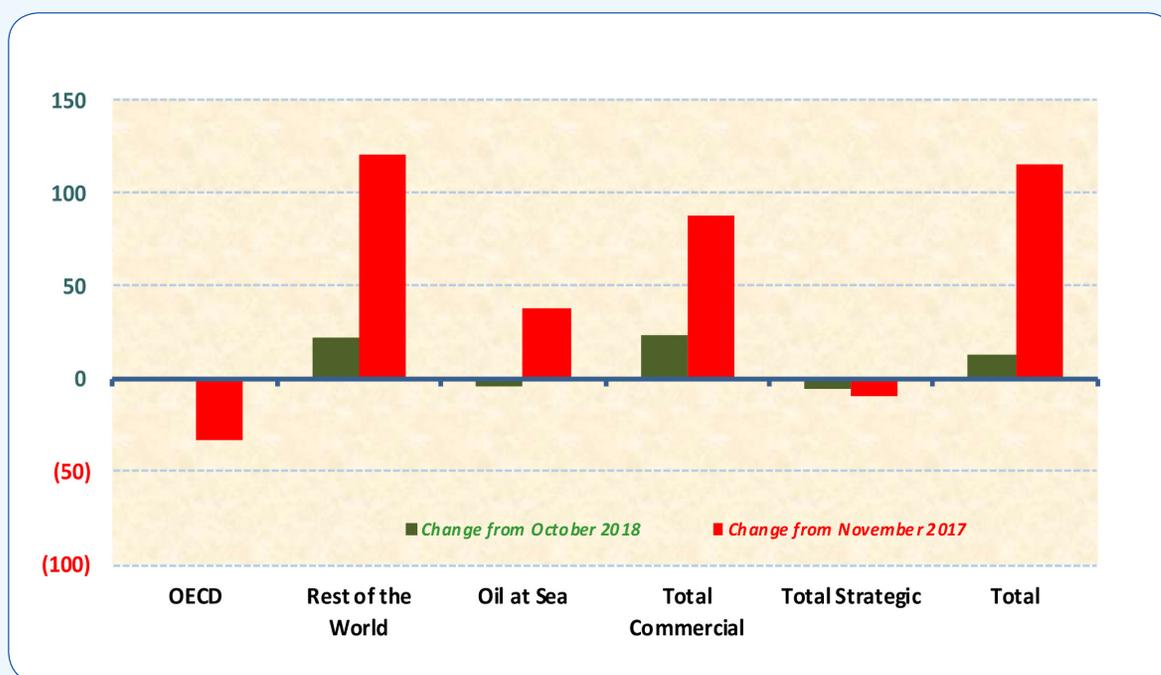
As a result, Total Commercial oil inventories in November 2018 increased by 23 million barrels to reach 5696 million barrels – a level that is 87 million barrels lower than a year ago.

Strategic inventories in OECD-34, South Africa and China decreased by 6 million barrels to reach 1835 million barrels – a level that is 10 million barrels lower than a year ago

Total world inventories, at the end of November 2018 were at 8748 million barrels, representing an increase of 13 million barrels comparing with the previous month, and an increase of 115 million barrels comparing with the same month a year ago.

Table (9) in the annex and figure (8) show the changes in global inventories prevailing at the end of November 2018.

**Figure - 8** Changes in Global Inventories at the End of November 2018 (Million bbl)



## II. The Natural Gas Market

### 1- Spot and Future Prices of Natural Gas in US market

The monthly average of spot natural gas price at the Henry Hub in November 2018 increased by \$0.81/ million BTU comparing with the previous month, to reach \$4.09/ million BTU.



The comparison, shown in **table (5)**, between natural gas prices and the WTI crude reveal differential of \$5.7/ million BTU in favor of WTI crude.

**Table 5** Henry Hub Natural Gas and WTI Crude Average Spot Prices, 2017-2018 (\$/ Million BTU<sup>1</sup>)

	Nov. 2017	Dec.	Jan. 2018	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.
<i>Natural Gas</i> <sup>(2)</sup>	3.0	2.8	3.9	2.7	2.7	2.8	2.8	3.0	2.8	2.9	3.0	3.3	4.1
<i>WTI Crude</i> <sup>(3)</sup>	9.8	10.0	11.0	10.7	10.8	11.4	12.1	11.7	12.2	11.7	12.1	12.2	9.8

1. British Thermal Unit.
2. Henry Hub spot price.
3. WTI – West Texas Intermediate Crude oil price, in dollars per barrel, is converted to dollar per million BTU using a conversion factor of 5.80 million BTU/bbl.

Source: <http://www.eia.gov/dnav/ng/hist/rngwhhdM.htm>

## 2- LNG Markets in North East Asia

The following paragraphs review the developments in LNG Markets in North East Asia, concerning prices and Japanese, Chinese and South Korean imports of LNG and their sources, and Spot LNG Exporters Netbacks.

### 2.1. LNG Prices

In October 2018, the price of Japanese LNG imports increased by \$0.3/million BTU comparing with the previous month to reach \$10.9 million BTU, and the price of Korean LNG imports increased by \$0.4/million BTU comparing with the previous month to reach \$11.1/ million BTU, whereas the price of Chinese LNG imports remained stable at the same previous month level of \$8.5/ million BTU.

### 2.2. LNG Imports

Total Japanese, Korean and Chinese LNG imports from various sources, increased by 6.6% or 931 thousand tons from the previous month level to reach 14.933 million tons.

**Table (6)** shows the prices and quantities of LNG imported by Japan, South Korea, and China for the period 2016-2018.

**Table6 LNG Prices and Imports: Korea, Japan, and China 2016-2018**

	Imports (thousand tons)				Average Import Price (\$/million BTU)		
	Japan	Korea	China	Total	Japan	Korea	China
<b>2016</b>	<b>82767</b>	<b>33257</b>	<b>26017</b>	<b>142041</b>	<b>6.9</b>	<b>6.9</b>	<b>6.5</b>
<b>2017</b>	<b>6969</b>	<b>3138</b>	<b>3191</b>	<b>13298</b>	<b>8.1</b>	<b>8.0</b>	<b>7.3</b>
January 2017	8302	4294	3436	16032	7.5	7.9	7.0
February	7790	3600	2372	13762	7.9	8.0	7.0
March	8143	3527	1991	13661	7.7	7.8	6.9
April	6573	2337	2171	11081	8.2	7.8	7.0
May	6239	2488	2911	11638	8.5	8.3	7.3
June	6185	3460	3038	12683	8.3	7.8	7.1
July	6817	2716	3121	12654	8.3	7.9	7.4
August	7259	2603	3140	13002	8.3	8.2	7.4
September	5821	2368	3454	11643	8.1	8.1	7.2
October	6137	2760	3567	12464	7.8	8.1	7.4
November	6411	3328	4056	13795	7.9	7.7	7.7
December	7953	4176	5029	17158	8.1	8.3	8.1
January 2018	8263	4144	5184	17591	8.7	8.7	8.4
February	8294	4588	3993	16875	9.2	9.9	8.6
March	7934	4304	3254	15492	9.5	9.4	8.7
April	5608	3217	3254	12079	9.4	9.3	8.7
May	6407	2784	4150	13341	9.6	9.8	8.5
June	5547	3758	4000	13305	9.8	9.8	8.5
July	6813	2746	4150	13709	9.8	10.0	8.5
August	7575	2920	4710	15205	10.2	10.2	8.5
September	6274	3358	4370	14002	10.6	10.8	8.5
October	6538	3795	4600	14933	10.9	11.1	8.5

Source: World Gas Intelligence various issues.



### 2.3. Sources of LNG imports

Australia was the big supplier of LNG to Japan and Korea with 2.927 million tons or 28.3% of total Japan, Korea and China LNG imports in October 2018, followed by Qatar with 18.7% and Malaysia with 11.4%.

The Arab countries LNG exports to Japan and Korea totaled 1.961 million tons - a share 13.1% of total Japanese and Korean LNG Imports during the same month.

### 2.4. LNG Exporter Netbacks

With respect to the Netbacks at North East Asia markets, Russia ranked first with \$9.90/million BTU at the end of October 2018, followed by Indonesia with \$9.68/million BTU then Malaysia with \$9.62/million BTU, and Australia with \$9.55/million BTU. LNG Qatar's netback reached \$9.17/million BTU, and LNG Algeria's netback reached \$8.57/million BTU.

**Table (7)** shows LNG exporter main countries to Japan, South Korea, and China and their netbacks at the end of October 2018.

**Table7** LNG Exporter Main Countries to Japan, Korea and China, And Their Netbacks\* at The End of October 2018

	Imports (thousand tons)			Spot LNG Netbacks at North East Asia Markets (\$/million BTU)
	Japan	Korea	Total	
<b><u>Total Imports, of which:</u></b>	<b><u>6538</u></b>	<b><u>3795</u></b>	<b><u>10333</u></b>	
<b>Australia</b>	2338	589	<b>2927</b>	<b>9.55</b>
<b>Qatar</b>	781	1153	<b>1934</b>	<b>9.17</b>
<b>Malaysia</b>	796	377	<b>1173</b>	<b>9.62</b>
<b>Russia</b>	495	193	<b>688</b>	<b>9.90</b>
<b>Indonesia</b>	334	254	<b>588</b>	<b>9.68</b>

\* Export Revenues minus transportation costs, and royalty fees.  
Source: World Gas Intelligence various issues.



**Tables Annex**

