



97TH MEETING OF OAPEC MINISTERIAL COUNCIL



AL MARZOUQ: OPEC'S HISTORIC DEAL HAS CAUSED GLOBAL OIL MARKETS TO REBALANCE

**OAPEC
WINS OIL & GAS
AWARD 2016**





The Cover

OAPEC Ministerial Council convened its 97th meeting on 22 December 2016, in Cairo, Egypt. The meeting was chaired by Kuwait's Oil, Electricity and Water Minister HE Essam Al Marzouq. The State of Kuwait is chairing the current term.



10 The 146th Meeting of OAPEC Executive Bureau



14 1st Petroleum Media Seminar- Bahrain

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.

- **OAPEC-Sponsored 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.



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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.

DEVELOPMENTS IN CLEANER FUEL PRODUCTION SECTOR IN OAPEC MEMBER COUNTRIES

OAPEC member countries are making great efforts over the production of cleaner fuel and observing the quality and standard specifications of transportation fuel. The member countries are driven by the increasing domestic and global interest in environment and climate change issues, and the need for keeping in pace with environment protection legislation standards and requirements that have witnessed important developments around the world in the past three decades.

By following these procedures, the member countries are seeking to protect public health and environment safety via cutting emissions resulting from using fuel. Also, they look for securing specifications that ensure the best performance of vehicle engines, as well as, achieving indirect benefits like improving national income through boosting a country's fuel exports, cutting expenses for medical care on environment pollution-related diseases, and offering new job opportunities in cleaner fuel refineries' development projects.

A recent study released by OAPEC Secretariat General titled "Cleaner Fuel Production in OAPEC Member Countries" found out that there were differences between the member countries in terms of the development stages of cleaner fuel production. This can be attributed to many factors, on top of which the capacity of operating oil refineries in any country to upgrade petroleum product specifications in line with the world standards.

The study draws attention to many challenges facing OAPEC members in developing cleaner fuel, including the huge investments needed for funding oil refineries' upgrade operations, burdens resulting from adopting advanced refining technology, as well as, difficulties related to the type of refined

crude, boosting the octane number of gasoline pool, and the ratio of hydro-treating units and conversion units to crude distillation capacity compared to the average world, EU, and USA refineries.

The study also shows that oil refineries in Arab countries are facing a problem of the existence of too many small-size refineries with a refining capacity of no more than 100 thousand barrels/day, constituting 46% of the total number of refineries in the member countries and 55% in the non-members. This resulted in weakening the economic feasibility of these refineries' upgrading projects.

The study indicated that OAPEC member countries have managed to handle many challenges facing the production of cleaner fuel through establishing new advanced refineries like KSA's SATORP and YASREF, with a capacity of 400 thousand b/d each, and the UAE's new Al Ruwais refinery, with a capacity of 417 thousand b/d, in addition to projects on upgrading existing refineries to enable them meeting the requirements of the world standards for cleaner fuel. Examples include Bahrain's Sitra refinery project, KSA's Riyadh refinery, and others.

The study reveals that OAPEC members plan to boost cooperation with global oil companies on cleaner fuel production and make use of the long expertise of these companies. The share of OAPEC joint oil refineries with international companies has increased from 17.5% of the total refining capacity in 2000 to 25% in 2015.

Moreover, the study stressed the importance of gradual implementation of the fuel's standard specifications according to: domestic conditions

of each country; taking into consideration climate conditions; cooperation with relevant international bodies in reviewing and developing standard specifications of fuel; in addition to, exchanging expertise and making use of the developed countries' and international companies' experiences in this field.

The study made many conclusions, most important of which include: stressing the importance of Arab refineries' adoption of the latest technologies at all stages of cleaner fuel production; flexibility in choosing the appropriate time for implementing quality standards; and the importance of conducting feasibility and technical studies before launching petroleum projects in general, and cleaner fuel projects in particular.

While observing current cleaner fuel production developments, OAPEC Secretariat General fully appreciates the efforts of its member countries in this very vital sector. Current projections indicate that most member countries, especially GCC countries, would transform into main cleaner fuel exporting centre to international markets. This would contribute to strengthening the member countries' economies and diversifying their national income sources. The Secretariat General also stresses the wide range of opportunities for cooperation and exchanging expertise among member countries in the cleaner fuel production sector. Finally, while continuing its scientific efforts to observe current conditions and future prospects of cleaner fuel production, OAPEC calls for further support to scientific research on fuel quality standard specifications.



97TH MEETING OF OAPEC MINISTERIAL COUNCIL

AL MARZOUQ: OPEC'S HISTORIC DEAL HAS CAUSED GLOBAL OIL MARKETS TO REBALANCE



OAPEC Ministerial Council convened its 97th meeting on 22 December 2016, in Cairo, Egypt. The meeting was chaired by Kuwait's Oil, Electricity and Water Minister HE Essam Al Marzouq. The State of Kuwait is chairing the current term.

His Excellency the Chairman opened the meeting and welcomed Their Excellencies the Ministers and Representatives of the member countries, especially Algeria's Energy Minister HE Nooreddin Bou Tarfa, Iraq's Oil Minister HE Jabbar Allu'aibi, and Libya's National Oil Corporation (NOC) Chairman HE Eng. Moustafa San'a-Allah, who were taking part in these meetings for the first time. He also extended thanks and gratitude to the Arab Republic of Egypt for the hospitality and wished the meeting all success. The Chairman stressed that the organization's ultimate goal was to achieve cooperation among its members in all petroleum-related aspects.

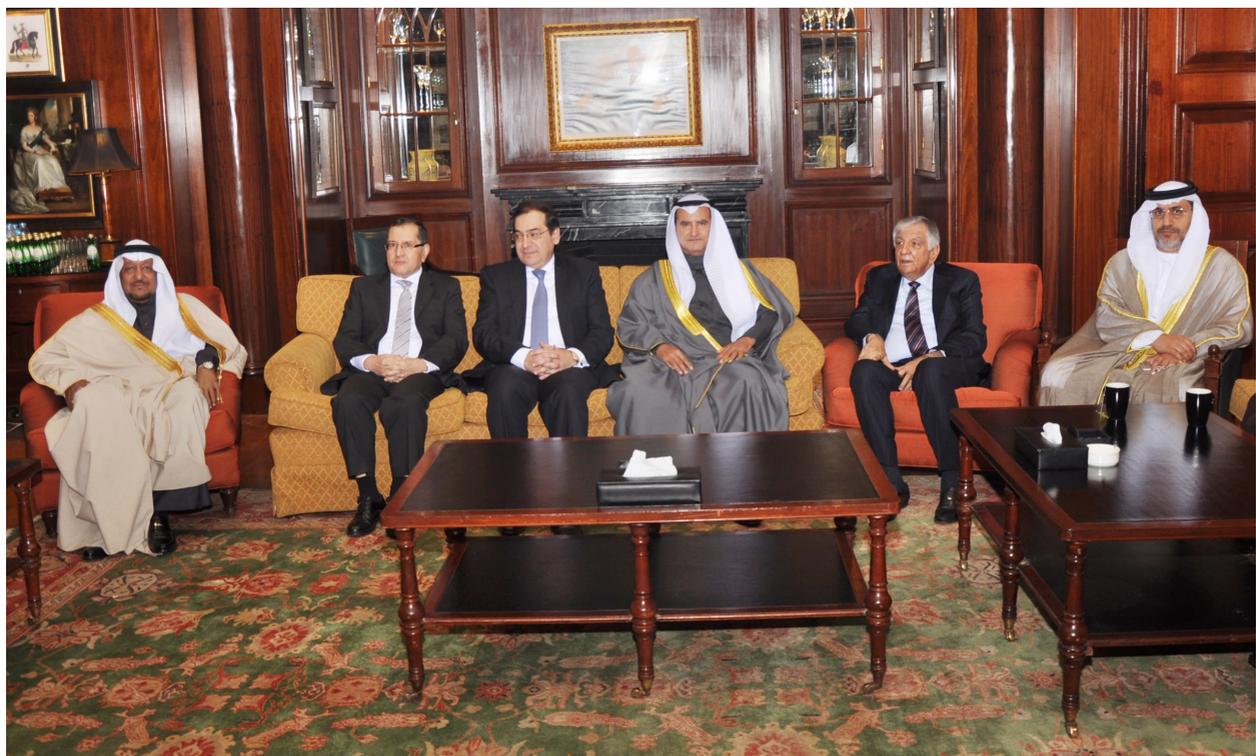
HE Al Marzouq referred to OPEC's historic deal to rebalance global oil markets, the role of OPEC and OAPEC member countries in making this deal a success, in addition



to the importance of the commitment of all parties in line with the recent Algeria agreement in September 2016 and OPEC's November 2016 Meeting. This has resulted in forming a ministerial committee to observe production. He also indicated the importance of the Paris 2015 Agreement on climate change which entered into force and how to adapt to

it to conform positively to the petroleum industry.

HE Abbas Ali Al Naqi, OAPEC Secretary General, followed with a speech welcoming their Excellencies the Ministers and Heads of Delegations of the member countries, especially HE Al Marzouq, Chair of the current round, and the other ministers who were taking part for the first time in the ministerial





meetings. He expressed thanks and appreciation to their predecessors for their significant roles and efforts in supporting the organization's work and activities.

HE Al Naqi expressed profound thanks and appreciation to Egypt for the hospitality and warm welcome wishing Egypt all progress, prosperity and stability. He also

wished the ministerial meeting all success.

The Council then discussed the points on the meeting agenda and approved the following items:

HE ESSAM AL MARZOUQ APPOINTED KUWAIT'S OIL, ELECTRICITY AND WATER MINISTER

The Emir of the State of Kuwait **HH Sheikh Sabah Al Ahmad Al Jaber Al Sabah** has issued an Amiri Decree on forming a new government in Kuwait. According to the decree, **HE Essam Al Marzouq** was appointed Minister of Oil, Electricity and Water, in succession to **HE Anas Al Saleh** who remained the Deputy PM and Finance Minister.

HE Abbas Ali Al Naqi, OAPEC Secretary General, sent a cable of congratulations to **HE Al Marzouq** on his new appointment while looking forward to the continuation of Kuwait's great support to OAPEC activities.



Endorsing the minutes of the 96th Ministerial Meeting held at the level of the representatives in Cairo, Egypt, on 16/5/2016.

OAPEC provisional budget for 2017 (Secretariat General and Judicial Tribunal) was approved.

Al Bassam & Partners were appointed as OAPEC (Secretariat General and Judicial Tribunal) auditors for 2017.

Reviewing the Secretariat General report on the "Global Petroleum Conditions" and the UNFCCC recent developments.

Taking note of the OAPEC Scientific Award 2016 under the title "Re-Refining of Used Lubricating Oils and its Economic and Environmental Implications" and the Award Arbitration Committee's decision to name two winners for the second prize (KD 5000), awarding one half to Mr Saad-Allah Fathi from Iraq, and the other half to Mr Jamal Harbi from Algeria. No research won the first prize.

Reviewing the reports on the Secretariat General's activities:

- Follow up on environment and climate change issues, especially COP-22 outcome



- in Marrakech, Morocco, from 7 to 18 November 2016
- Finalized studies prepared by the Secretariat General including 7 technical and economic studies on oil and energy.
- Databank progress and activity development
- All other activities which the Secretariat General organized or took part in during 2016 (15 events).
- The Council reviewed the OAPEC Joint Ventures Activity Report in 2015 and the first half of 2016, and took note of the outcome of the 45th Coordinating Meeting of the Joint Ventures' Officials held in Cairo on 29/10/2016.
- The Council resolved to extend the period where the Republic of Iraq is assigned to supervise the Arab Oil Training Institute, for one

year, with effect from 1 January 2017.

- The Council agreed on the renewal of the tenure of OAPEC Secretary General HE Abbas Ali Al Naqi for three more years as of the last date of his current tenure.
- Libya will chair the next round of OAPEC Ministerial Council and Executive Bureau for a year starting from 1 January 2017.
- The Chairman has sent a cable of thanks and appreciation to the President of Egypt HE President Abdul Fattah Al Sisi, also on behalf of Their Excellencies the Ministers and Heads of Delegations, for the hospitality and warm welcome.
- It was agreed to hold the next ministerial meeting in Kuwait on 10 December 2017.

Cairo, 22 December 2016.

THE 146TH MEETING OF OAPEC EXECUTIVE BUREAU



OAPEC Executive Bureau held its 146th Meeting on 8 and 9 December 2016 in Cairo, Egypt. The meeting was chaired by HE Sheikh Talal Nasser Al Athbi Al Sabah, Kuwait's Representative at the Executive Bureau and Acting Undersecretary at Kuwait's Oil Ministry. Kuwait heads OAPEC's current round 2016. Their Excellencies the Executive Bureau Members represented their countries at the meeting.

The Chairman opened the meeting with a speech welcoming Their Excellencies the Executive Bureau Members and wishing them a pleasant stay in Egypt. He also thanked OAPEC Secretariat General for their sincere efforts in preparing for the meeting to ensure its swift progress.

Then, OAPEC Secretary General HE Abbas Ali Al Naqi addressed the meeting welcoming Their Excellencies the Executive Bureau Members. HE Al Naqi indicated that the meeting was allocated for discussing the preparations for the 97th meeting of OAPEC Council of Ministers. The meeting then moved on to discuss the points on its agenda and took necessary actions respectively.





HE Dr. Mattar Al Neyadi
UAE



HE Ali Abdul Jabbar Al Sawad
BAHRAIN



H.E. Mohammed Ras El Kaff
ALGERIA



HE Eng. Nasser Bin Ibrahim Al Fawzan
KSA



HE Eng. Abdullah Al Khattab
SYRIA



HE Hasan M. Habibib Al Rufaii
IRAQ



HE Sheikh Mishall bin Jabor Al Thani
QATAR



HE Sheikh Talal Naser Al Sabah
KUWAIT



HE Eng. Mohammed K.Zendah
LIBYA



HE Eng. Gamal Abdul Hameed Hijagzi
EGYPT





MARRAKECH CLIMATE CHANGE CONFERENCE (COP-22)

In its capacity as an IGO, OAPEC Secretariat General participated in the twenty-second session of the Conference of the Parties (COP 22), and the twelfth session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP 12), held in Marrakech, Morocco, from 7 to 18 November 2016. More than 23500 participants including over 70 heads of states and governments, as well as, ministers and heads of delegations took part in the event. OAPEC Secretariat General was represented by the Secretary General HE Abbas Ali Al Naqi, and the Director of the Information and Library Department Mr Abdul Kareem Ayed.



MARRAKECH 2016
COP22|CMP12|CMA1
UN CLIMATE CHANGE CONFERENCE

The conference also included the first session of the “Ad Hoc Working Group on the Paris Agreement (APA)”, after the entry of the Paris Agreement into force on 4 November 2016, following the ratification by more than 100 countries until now. 55 countries that account for at least 55% of global emissions have also deposited their instruments of ratification.

Most important outcome of the COP22 in Marrakech:

- At the First Session of the Conference of the

Parties serving as the meeting of the Parties to the Paris Agreement (CMA 1) in Marrakech: the parties decided to extend the work of the CMA until the decisions are ready for the COP24 in 2018.

- Mitigation: the Paris Agreement calls for more guidance to the parties on NDCs features. Developing countries believe that developed countries’ NDCs should be different, the thing that was opposed by the latter.



- Adaptation: discussions took place over potential components of adaptation, transparency, and global evaluation. The committee looked into how to develop adaptation efforts and how to conduct evaluation and support.
- Finance: developed countries should submit biannual reports on the financing support they provide, as well as, projected future support levels.
- Developed countries provided their visualization on how to continue scaling up their financial contributions towards the pre-agreed “\$100bn a year by 2020” goal. Some countries have also pledged \$23 million for the CTCN that provide help and capacity building for developing countries.
- Transparency: countries have to submit their views on the adaptation communications that they agreed to submit as part of the Paris Agreement, what features should be included as part of future NDCs, and how future climate action should be transparent.
- Adaptation Fund: it was agreed that the Adaptation Fund should be moved over to the Paris Agreement.
- Over \$50 million allocated for developing countries’ capacity building and requirements
- Doubling the World Bank funding by \$1.5 billion for MENA region by 2020
- Loss and damage: countries approved a five-year work-plan on “loss and damage.” The next review will be in 2019.

The Marrakech Action Proclamation: issued by heads of state and government gathered at the COP-

22, on climate and sustainable development. They announced moving over to the stage of executing the pledges by participating countries, working on climate and sustainable development, continuing the efforts to eradicate poverty, ensuring food security, scaling up the aspired \$100 billion/year funding to fight climate change impacts, looking for solutions by 2020, and taking into consideration the needs of developing and least developed countries.

OAPEC Event at the COP22

“Creating Added Value from CO2 Emissions”

On the sidelines of the COP22, OAPEC Secretariat General, in collaboration with the State of Qatar and the Saudi Energy, Industry, and Mineral Resources Ministry, organized an event on “Creating Added Value from CO2 Emissions” on 10 November 2016. The goal of the event has been reviewing the developments of the carbon capture and storage (CCS) technology and how to continue using it in oil industry-related activities including oil, gas, downstream industries, food, waste, etc.

The event was attended by OAPEC Secretary General HE Abbas Ali Al Naqi, and a number of experts from Saudi Arabia, Kuwait, and Qatar, as well as, a large group of environment and climate change experts from Arab and foreign countries. They discussed current and future challenges facing the CCS technology and means to handle them.

It is worth mentioning that the next SBI-SBSTA meeting is scheduled for 8-18 May 2017 in Bonn, Germany. Also, Fiji will head the COP-23 in Bonn, Germany, on 6-17 November 2017; while, Poland will host COP-24 on 5-16 November 2018.

1ST PETROLEUM MEDIA SEMINAR- BAHRAIN



OAPEC Secretariat General took part in the First Petroleum Media Seminar on 27 November 2016 at the Bahrain Petroleum Company (BAPCO) Club in Bahrain. National Oil and Gas Authority (NOGA) in collaboration with the GCC Secretariat General co-organized the event.

A number of academics, experts, and researchers from NOGA, its affiliate petroleum companies, as well as, Mass Communication and Public Relations, and Business Administration Colleges participated in the event. Also, representatives from the press, KSA, Kuwait, GCC Secretariat General, and OAPEC Secretariat General took part in the seminar.

The seminar aimed at promoting several topics related to GCC petroleum media strategies through enhancing petroleum understanding and culture in the GCC countries, strengthening cooperation between GCC petroleum media and the world media, highlighting the GCC countries petroleum status, stressing the importance of the GCC countries as a main and reliable source of energy, stressing the petroleum strategic and economic importance, in addition to cooperating with global petroleum organizations in the field

of petroleum media.

The seminar was inaugurated by Bahrain's Oil Minister HE Sheikh Mohammed bin Khalifa Al Khalifa who welcomed the audience and tackled the development of the oil industry in Bahrain. He said that the petroleum media is part of the GCC petroleum strategy and that the seminar is held in response to the directives of Their Excellencies the GCC Petroleum Ministers on organizing it every two years and continuing to organize the Petroleum Media Forum biennially.

The seminar included lectures and presentations on various topics like the GCC petroleum media strategy and the role of media in environment protection and climate change.

OAPEC representative at the seminar Mr Abdul Kareem Ayed presented a paper on the petroleum media and globalization challenges; the birth and history of petroleum media, its levels, and goals; globalization media, its characteristics, features, and dimensions; petroleum media under the umbrella of globalization; Arab petroleum media rhetoric; and the role of OAPEC in the Arab petroleum media.

OAPEC WINS OIL & GAS AWARD 2016



OAPEC took an active part in the INTERGAS Summit held in Nice, France, on 28 and 29 November 2016, where it won The Oil and Gas Award of the Year 2016 on the best research papers presented at the summit through voting by the summit participants. A large number of companies and global energy and petroleum organizations participated in the event.

OAPEC's participation in such international events comes as part of its efforts to boost its presence in the international arena in order to highlight the viewpoint of its member countries at international forums on oil, gas, and energy- related issues in light of the ongoing industry developments both regionally and globally.

The paper was presented at the opening session by Eng. Wa'el Abdul Mo'uti, Gas Industries' Expert, Technical Affairs Department, under the title "Reality and Future of Natural Gas Industry and Trade in the Arab Countries." It reviewed the current situation and future prospects of the natural gas industry in the Arab countries. It explained that natural gas reserves in the Arab countries reached about 27% of the total world gas reserves by the end of 2015. The average natural gas production and consumption rates per annum during the last decade (2005-2015) reached about 4.2% and 4.6% respectively.

The paper also tackled the importance of natural gas in the world's energy mix since it contributes by about 48% in the primary energy consumption.

It also plays a major role in achieving sustainable development in various sectors like electricity, where gas contributed by 63% and helped actively in cutting carbon dioxide emissions per kilowattour when generating electricity.

The paper reviewed the two types of natural gas export infrastructures to international markets (via pipelines and LNG). It indicated that the Arab region has half of the world's LNG production capacity. The paper concluded by presenting future prospects of the gas industry in the region, as well as, examples of some development projects in some Arab countries like the UAE; KSA; Kuwait; and Egypt, which would add up about 180 billion cubic meters per annum of natural gas by 2021.

The Secretariat General also participated in the open dialogue session tackling global trends and opportunities in LNG markets.

The summit's 6 main topics were:

- Gas as a means for achieving energy security
- Global trends and opportunities in LNG markets
- Role of technology and innovation in gas infrastructure
- Using natural gas in electricity generation
- Developments of LNG production technology with limited capacity
- Role of LNG receiving terminals/importing ports in Europe

5TH ARAB-INDIAN PARTNERSHIP CONFERENCE TOWARDS IT INNOVATION AND COOPERATION



OAPEC Secretariat General took part in the 5th Arab-Indian Partnership Conference held in Oman from 14 to 15 December 2016 under the slogan “Towards IT Innovation and Cooperation”. The event was co-organized by Oman Chamber of Commerce and Industry (OCCI) in cooperation with the Secretariat General of the Arab League, the Foreign Ministry of the Sultanate, Ministry of State for External Affairs in the Republic of India, General Union Of Chambers Of Commerce, Industry & Agriculture For Arab Countries, Indian Confederation of Chambers of Commerce and Industry, and Arab Businessmen Union. Mr Majed Amer, Economic Researcher, Economic Department, represented OAPEC at the conference. He presented a paper at the second session on renewables and clean technology titled “Increasing Importance of Renewables in Arab Energy Mix”. The paper tackled 4 topics: highlighting the status of Arab countries in the global energy market; primary energy mix development; electricity generation as the biggest primary energy consuming sector; and



finally the reality and future of renewables in the Arab countries.

The conference communiqué stressed the importance of establishing an Arab-Indian chamber of commerce under the umbrella of the Arab League and the Indian Confederation of Chambers of Commerce and Industry, and working on diversifying the and strengthening the exceptional investment ties between the two sides. It also proposed conducting a detailed study on providing information and investment opportunities to develop a joint action plan, building capacity in vital sectors like SMEs in the Arab region, and encouraging cooperation in innovation, IT, and exchanging expertise in this field.

OAPEC PARTICIPATES IN ENVIRONMENT SECURITY CONFERENCE IN RIYADH



Upon a kind invitation by Naif Arab University for Security Sciences (NAUSS), OAPEC Secretariat General took part in the Environment Security Conference held at NAUSS headquarters in Riyadh from 29 to 30 November 2016. A group of experts and specialists from Arab countries and international organizations like the Arab League and The International Society for Quality in Health Care (ISQua) took part in the event.

The conference aimed at reviewing methods to achieve environment security at the Arab countries' level to boost the comprehensive security system; identifying the most significant challenges facing environment security; achieving the best preemptive methods in environment security; and being informed about the pioneer international and Arab experiences in the environment security field.

The conference was opened by NAUSS President HE Dr Jamaan bin Raqqoush who welcomed the audience and stressed the importance of comprehensive security and coming up with recommendations serving the Arab environment action. The conference tackled the following issues over 2 days:

- **The concept of environment security**
- **Sustainable development**
- **Environment security challenges at Arab and international levels**
- **The role of civil society and security institutions in achieving environment security**
- **Showcasing some of the leading Arab and foreign experiments in environment security**
- **Projecting the future of Arab environment security**

OAPEC representative **Mr Abdul Kareem Ayed** presented the outcome of the Paris Agreement 2015 on the UNFCCC and its entry into force in November 2016. He also presented IPCC reports, and talked about CCS technology in some OAPEC member countries. At the end of the meeting OAPEC representative took part in the final drafting of the recommendations of the environment security seminar to be submitted to the Arab League that included activating the role of Arab media in environment issues, requesting education ministries to include environment security topics in graduation projects and during the various stages of education.



OAPEC AT KUWAITI OIL MINISTRY'S SEMINAR

Within the framework of cooperation between OAPEC and its member countries, the Secretariat General took part in a seminar on “Investing in Renewables: solar, water, and wind” organized by the Petroleum Media Department at the Oil Ministry in the State of Kuwait on 19 December 2016. Mr Abdul Fattah Dandy, Director, Economic Affairs Department, OAPEC,



presented a paper on the “Current Status and Future Prospects of Renewables in the Arab Energy Mix”.

The paper tackled four focal points: the Arab countries’ position in global energy markets: now and in the future; global primary energy mix and the types of fuel used in generating electricity until 2040; the development of global investments in renewables; and the current status and future prospects of renewables in the Arab countries.

The paper stressed that the enormous resources of renewables available in the Arab countries, especially solar and wind, would provide an important source to support oil and gas in the domestic energy mix. They would contribute to maximizing income sources through liberating more oil and gas to be exported, as well as, supporting public income by additional revenues via exporting electricity generated by renewables to neighbouring regional markets in a later stage.



INTRODUCTORY MEETING ON JOINT ARAB ECONOMIC REPORT 2017

OAPEC Secretariat General took part in the Introductory Meeting on Joint Arab Economic Report 2017 held at the headquarters of the Arab Fund for Economic and Social Development in Kuwait from 5 to 7 December 2016. Representatives from the Arab League's Secretariat General, the Arab Monetary Fund, and the Arab Fund for Economic and Social Development took part in the event. Mr. Abdul Fattah Dandy, Director of the Economic Affairs Department, and Mr. Majed Amer, Economic Researcher at the same department, represented OAPEC Secretariat General at the meeting.

During the meeting, the contents of the report chapters have been discussed. Their structure has been approved according to the format presented by the institutions working on the report. Chapter 5 on oil and energy developments, prepared by

the Secretariat General, has also been discussed. It covers the general status of exploration, reserves, production (both on Arab and international levels), energy demand, world oil stocks (commercial and strategic), oil and natural gas exports, and the value of the Arab oil exports. OAPEC also prepares the section on hydrocarbon industries in chapter 4 on the industrial sector.

The conveners stressed the importance of continuing to develop the report through adding a summary in Arabic along with the English version, increasing the number of sections in any single chapter to cover the latest on its topic, and adding a main relevant issue/theme that changes every year, whenever possible. Also, it has been agreed that the topic of the pivotal chapter for 2017 will be on the "Reality and Future Economic and Social Prospects of Arab Women Empowerment."

Study:

OAPEC ANNUAL STATISTICAL REPORT 2016 RELEASED

OAPEC Secretariat General released its Annual Statistical Report for the Year 2016 including data on Arab member and non-member countries, as well as, total energy data of OPEC members and the world from 2011 to 2015.

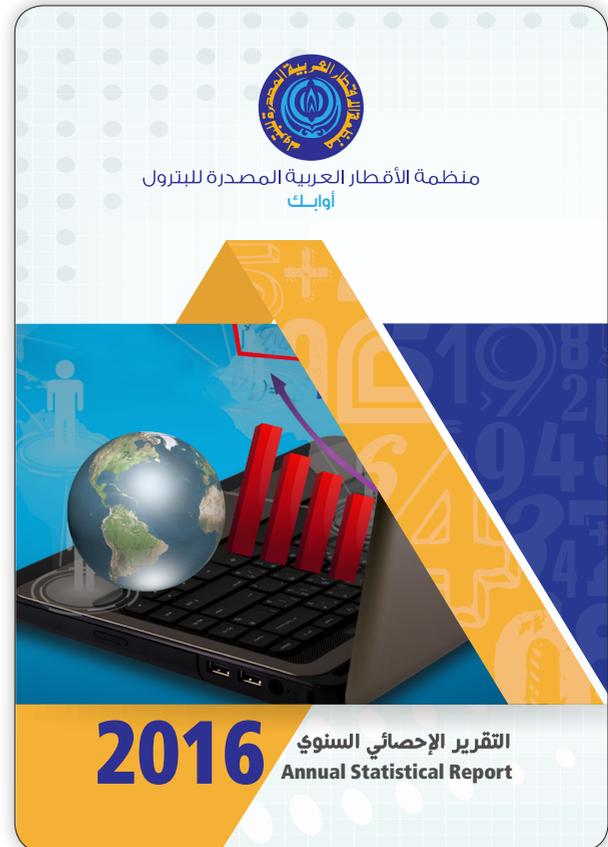
The report has nine main sections. Section one presents general indicators of OAPEC member countries. Section two tackles data on reserves, production, and new discoveries. It is worth mentioning that Arab conventional crude oil reserves by the end of 2015 were estimated at about 712.2 billion barrels, representing a share of about 55.5% of the world's reserves of 1285.4 billion barrels. Arab natural gas reserves were estimated at about 54.5 trillion cubic meters, representing 27.7% of the world's reserves.

Arab countries' crude oil and NGL production reached about 27.6 million barrels/day in 2015, out of which 96% was produced by OAPEC members. Arab countries' crude oil production alone reached 23.6 million barrels per day, up by 4.3% compared to 2014, and representing about 30.3% of the global production. Marketed natural gas production in the Arab countries reached 559.1 billion cubic meters in 2015, out of which OAPEC members claimed about 527.2 billion cubic meters, representing 94.3% of the Arab countries' production. Arab countries' combined production accounted for about 15.3% of the world's production of 3644 billion cubic meters.

As for exploration, OAPEC members made about 81 new discoveries in 2015, including 49 oil discoveries, and 32 natural gas discoveries. Other Arab countries made 6 natural gas discoveries.

Section three of the report tackled oil and natural gas processing. Design capacities of existing oil refineries in the Arab countries reached about 8.8 million b/d in 2015. Arab countries' petroleum products production reached about 7.4 million b/d, representing an increase of 8.6% compared 2014.

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. Energy consumption in the Arab countries in 2015 reached



about 14.4 million BOE/d, including 7.098 million BOE/d of crude oil and petroleum products, and about 7.055 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 spot prices of Arab and world crudes, OPEC basket spot prices, and energy products prices in local currencies and the US dollar from 2013 to 2016.

Moreover, the last three sections of the report highlight oil and gas transportation according to the number and tonnage of oil tankers, and pipeline networks available in member countries. The chapters also introduce some general economic indicators and data on electricity in the Arab countries.

APICORP INVESTS IN BAHRAIN'S FALCON CEMENT COMPANY 30% EQUITY ACQUISITION UNDERLINES APICORP'S COMMITMENT TO BOOSTING ECONOMIC GROWTH IN THE REGION

The Arab Petroleum Investments Corporation (APICORP), an OAPEC joint venture, announced the acquisition of a 30% stake in Bahrain's Falcon Cement Company (FCC). FCC is the largest and only integrated cement producer in Bahrain. The closed joint stock company provides cement used in large scale projects for public and private customers primarily in the Kingdom. FCC has a current capacity of 1000 tons per day and is in the advanced stages to double the production to 2400 tpd by 2017.

The FCC deal capitalizes on a raft of major industrial and infrastructure projects that are spurring activity and investment in Bahrain's construction industry. The Kingdom's total project pipeline, including long-term builds like the \$3bn King Hamad Causeway set to be completed around 2025, amounts to \$72.7bn, up 4.7% year-on-year, according to the latest economic quarterly update from the Bahrain Economic Development Board.

This pipeline includes the \$5bn Bahrain Petroleum Company (Bapco) upgrade and expansion of the Sitra refinery; the \$3bn Aluminum Bahrain (Alba) Line 6 smelting project; Bahrain



Airport Company's \$1.1bn airport expansion project; and the \$655m offshore liquefied natural gas (LNG) terminal being commissioned by the National Oil and Gas Authority (NOGA).

On another note, APICORP announced it has provided a \$370,000 funding for drilling water well and for the rehabilitation of Al Jafr Agricultural Project in Jordan. This CSR project aims at supporting Al Jafr farmers, improving their living, and providing job opportunities. It will provide easy access to water for irrigation for 2,500 acres of land suitable for agriculture and planting of Trefoil, barley, wheat, and olives.

ASRY WINS 'SHIPYARD OF THE YEAR 2016' AWARD

ASRY (Arab Shipbuilding & Repair Yard), an OAPEC joint venture, has won the Shipyard Of the Year Award at the recent Lloyds List Middle East and Indian Subcontinent (MEIS) Awards 2016, one of the region's leading honours in the shipping industry. This is the second year in a row the yard has taken home the award, which recognises a shipyard in the Middle East or Indian Subcontinent region that has consistently met the needs of its customers in these times of tight capacity.

ASRY Chairman, Shaikh Daij Bin Salman Al Khalifa, who received the award on behalf of ASRY, commented, "It is very gratifying to see the judging committee recognise ASRY's proactive approach to the challenges of a low maritime repair market to maintain its position as the region's leading shipyard. Despite harsh conditions in



2015, ASRY posted the highest number of vessels repaired in a single year at 243, and in 2016 the highest number of rigs repaired in a single year. We are committed to constant evolution to maintain our leading position, putting customer satisfaction and safety above all else."

This award comes off the back of the shipyard also winning the Corporate

Social Responsibility Award at the Seatrade Maritime Awards earlier in the year, showing that despite changes taking place in the yard's senior management, operations are continuing unaffected. The panel of independent judges debated the winners in a private closed-door session to determine the overall winners. The gala event took place in Dubai with leaders from the regional maritime industry attending. This recent accolade is ASRY's fourth victory in the Shipyard of the Year award category, which it also won in 2015, 2013 and 2011.

On another note, ASRY has announced that it appointed Mr Andrew Shaw will as the new Chief Executive, effective early January 2017. He re-joins the company after previously holding the position of General Manager of the ASRY Offshore Services division from 2009 to 2014.

Petroleum Developments in the World Market and Member Countries*

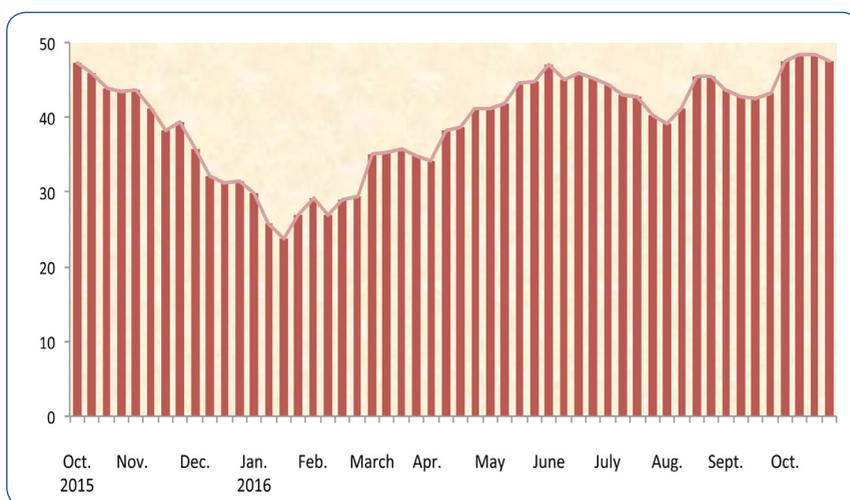
1. Oil Market

1. Prices

1-1 Crude Oil Prices

Weekly average price of OPEC basket increased during the first week of October 2016, to reach \$47.5/bbl, and continued to raise thereafter, to reach its highest level of \$48.5/bbl during the second week. During the fourth week, weekly average price declined to reach its lowest level of \$47.4/bbl, as shown in figure 1:

Figure - 1 Weekly Average Spot Price of the OPEC Basket of Crudes 2015 - 2016 (\$/bbl)



On monthly basis, OPEC Reference Basket in October 2016, averaged \$47.9/bbl, representing an increase of \$5/bbl or 11.6% comparing with previous month, and an increase of \$2.8/bbl or 6.3% from the same month of previous year. OPEC agreement was reached in Algiers that seeks to bring forward market balance, declines in US crude oil stocks and hurricane - related logistical disruptions for US Gulf Coast (USGC) oil facilities, were major stimulus for the increase in oil prices during the month of October 2016 to reach its highest level since July 2015.

Key Indicators

- In October 2016, **OPEC Reference Basket increased** by 11.6% or \$5/bbl from the previous month level to stand at \$47.9/bbl.
- **World oil demand** in October 2016, **increased** by 0.6% or 0.6 million b/d from the previous month level to reach 97.6 million b/d.
- **World oil supplies** in October 2016, **increased** by 0.9% or 0.9 million b/d from the previous month level to reach 99.8 million b/d.
- **US tight oil production** in October 2016, **decreased** by 1.2% to reach about 4.5 million b/d, whereas **US oil rig count increased** by 15 rig from the previous month level to stand at 367 rig.
- **US crude oil imports** in September 2016, **decreased** by 6.6% from the previous month level to reach 8 million b/d, and **US product imports decreased** by 4.3% to reach about 2.2 million b/d.
- **OECD commercial inventories** in September 2016 **decreased** by 17 million barrels from the previous month level to reach 3068 million barrels, and **Strategic inventories** in OECD-34, South Africa and China **remained stable** at the same previous month level of 1870 million barrels.
- **The average spot price of natural gas** at the Henry Hub in October 2016 **decreased** by \$0.01/million BTU comparing with the previous month to reach \$2.98/million BTU.
- **The Price of Japanese LNG imports increased** in September 2016 by \$0.4/m BTU to reach \$7.1/m BTU, **the Price of Korean LNG imports increased** by \$0.4/m BTU to reach \$6.8/m BTU, and **the Price of Chinese LNG imports increased** by \$0.1/m BTU to reach \$6.1/m BTU
- **Arab LNG exports to Japan, Korea and China** were about 3.152 million tons in September 2016 (a share of 27.6% 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 :

Table 1 Change in Price of the OPEC Basket of Crudes, 2015-2016 (\$/bbl)

	Oct. 2015	Nov.	Dec.	Jan. 2016	FEB.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
OPEC Basket Price	45.0	40.5	33.6	26.5	28.7	34.7	37.9	43.2	45.8	42.7	43.1	42.9	47.9
Change From previous Month	0.2	-4.5	-6.9	-7.1	2.2	5.9	3.2	5.4	2.6	-3.1	0.4	-0.2	5.0
Change from same month of previous Year	-40.0	-35.1	-25.9	-17.9	-25.3	-17.8	-19.4	-19.0	-14.4	-11.5	-2.4	-1.9	2.8

* 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.

Figure - 2 Change in the Price of the OPEC Basket of Crudes, 2015-2016 (\$/bbl)

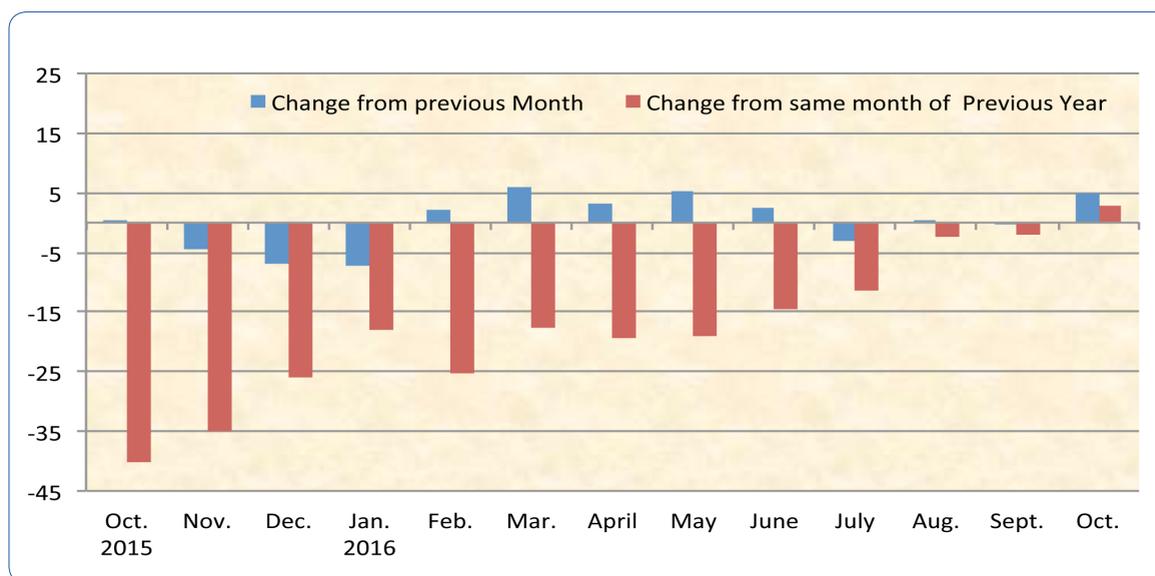


Table (3) in the annex show spot prices for OPEC basket and other crudes for the period 2014-2016.

1-2 Spot Prices of Petroleum Products

- US Gulf

In September 2016, the spot prices of premium gasoline decreased by 1.4% or \$0.9/bbl comparing with their previous month levels to reach \$64.1/bbl, whereas spot prices of gas oil increased by 2.3% or \$1.2/bbl to reach \$53.7/bbl, and spot prices of fuel oil increased by 5.2% or \$1.8/bbl to reach \$36.3/bbl.

- Rotterdam

The spot prices of premium gasoline increased in September 2016, by 3.9% or \$2.5/bbl comparing with previous month levels to reach \$66.6/bbl, spot prices of gas oil increased by 2.9% or \$1.6/bbl to reach \$55.9/bbl, and spot prices of fuel oil increased by 7.3% or \$2.7/bbl to reach \$39.5/bbl.

- Mediterranean

The spot prices of premium gasoline increased in September 2016, by 5.1% or \$2.9/bbl comparing with previous month levels to reach \$59.4/bbl, spot prices of gas oil increased by 2.5% or \$1.4/bbl to reach \$57/bbl, and spot prices of fuel oil increased by 7% or \$2.6/bbl to reach \$40 bbl.

- Singapore

The spot prices of premium gasoline increased in September 2016, by 7% or \$3.8/bbl comparing with previous month levels to reach \$58/bbl, spot prices of gas oil increased by 2% or \$1.1/bbl to reach \$55.1/bbl, and spot prices of fuel oil increased by 6.2% or \$2.4/bbl to reach \$41.1/bbl.

Figure (3) shows the price of Premium gasoline in all four markets from September 2015 to September 2016.

Figure - 3 Monthly Average Spot Prices of Premium Gasoline, 2015-2016 (\$/bbl)

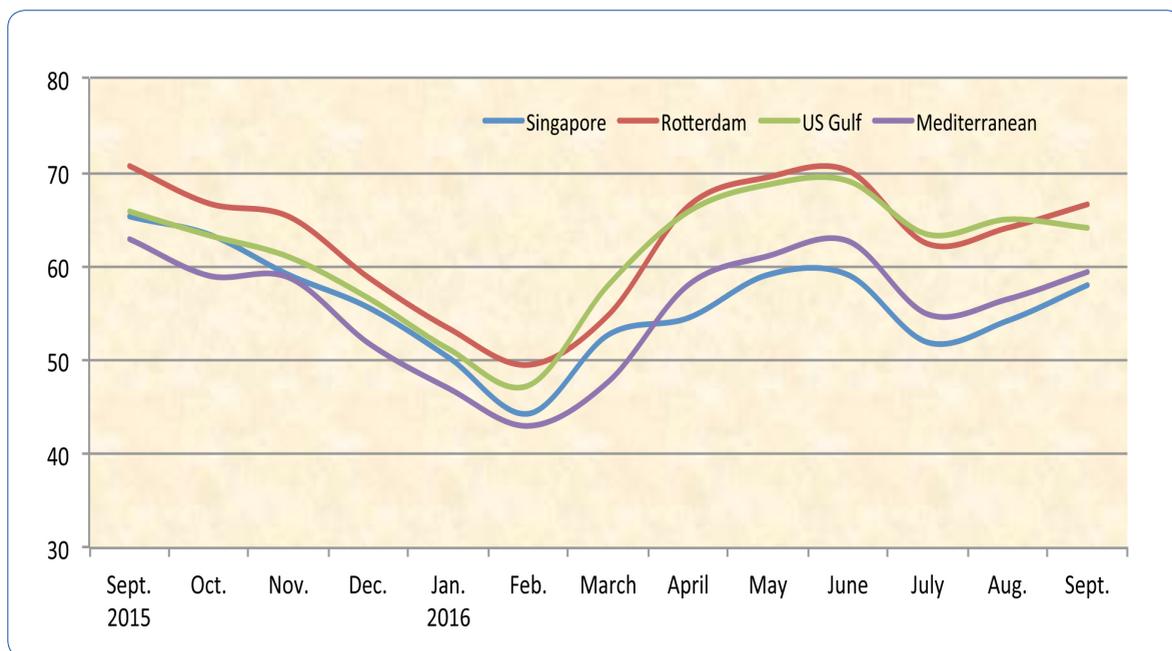


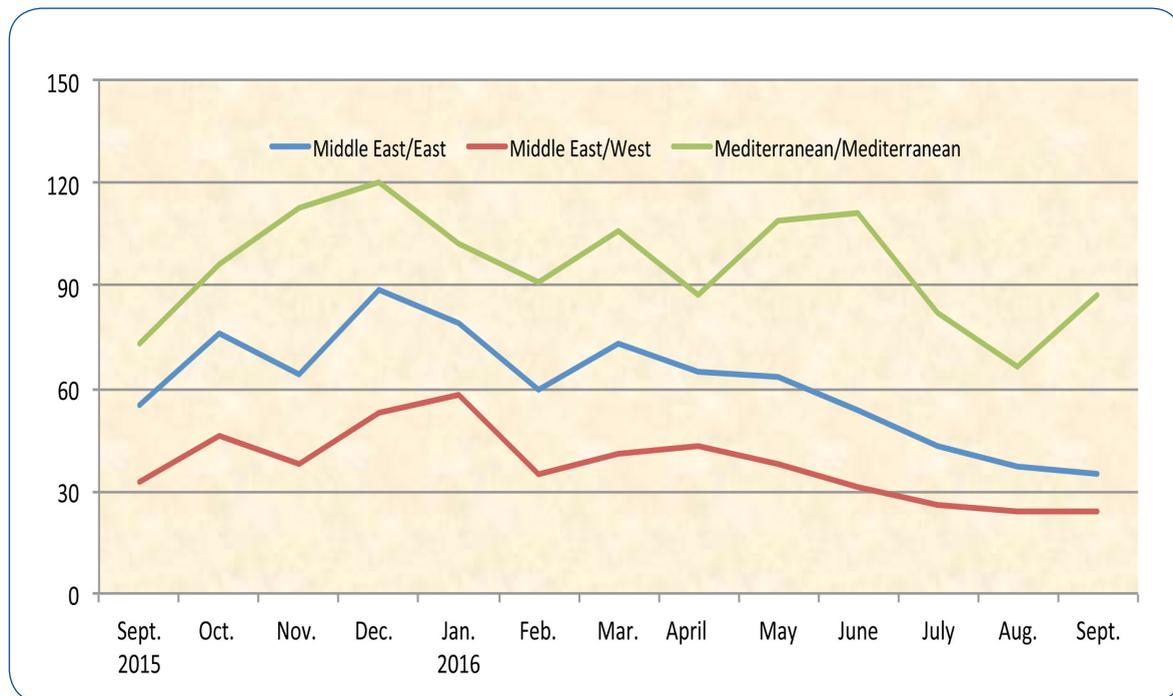
Table (4) in the annex shows the average monthly spot prices of petroleum products, 2014-2016.

1-3 Spot Tanker Crude Freight Rates

In September 2016, Freight rates for crude oil for tanker size (230-280 thousand deadweight tons (dwt)), leaving Middle Eastern ports to the East, decreased by 2 points or 5.4% comparing with previous month to reach 35 points on the World Scale (WS*), whereas freight rates for inter - Mediterranean for small to medium sized tankers (80-85 thousand deadweight tons (dwt)), increased by 21 points or 31.8% comparing with previous month to reach 87 points on the World Scale (WS). Freight rates for crude oil for tanker size (270-285 thousand deadweight tons (dwt)), leaving Middle Eastern ports to the West, remained stable at the same previous month level of 24 points on the World Scale (WS),

Figure (4) shows the freight rates for crude oil to all three destinations from September 2015 to September 2016.

Figure - 4 Monthly Spot Crude Oil Tanker Freight Rates, 2015 -2016 (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 September 2016, monthly spot Tanker freight rates for petroleum products [for tanker size 30-35 thousand deadweight tons (dwt)], leaving Middle Eastern ports to the East, decreased by 22 points, or 19.8% comparing

with previous month to reach 89 points on WS, freight rates for Petroleum Products across Mediterranean [for tanker size 30-35 thousand deadweight tons (dwt)], decreased by 14 points, or 12.4% to reach 99 points on WS, and freight rates for petroleum products [for tanker size 30-35 thousand deadweight tons (dwt)], leaving Mediterranean to North-West Europe decreased by 15 points, or 12.2% to reach 108 points on WS.

Figure (5) shows the freight rates for oil products to all three destinations from September 2015 to September 2016.

Figure - 5 Monthly Spot Product Tanker Freight Rates, 2015 -2016 (World Scale)

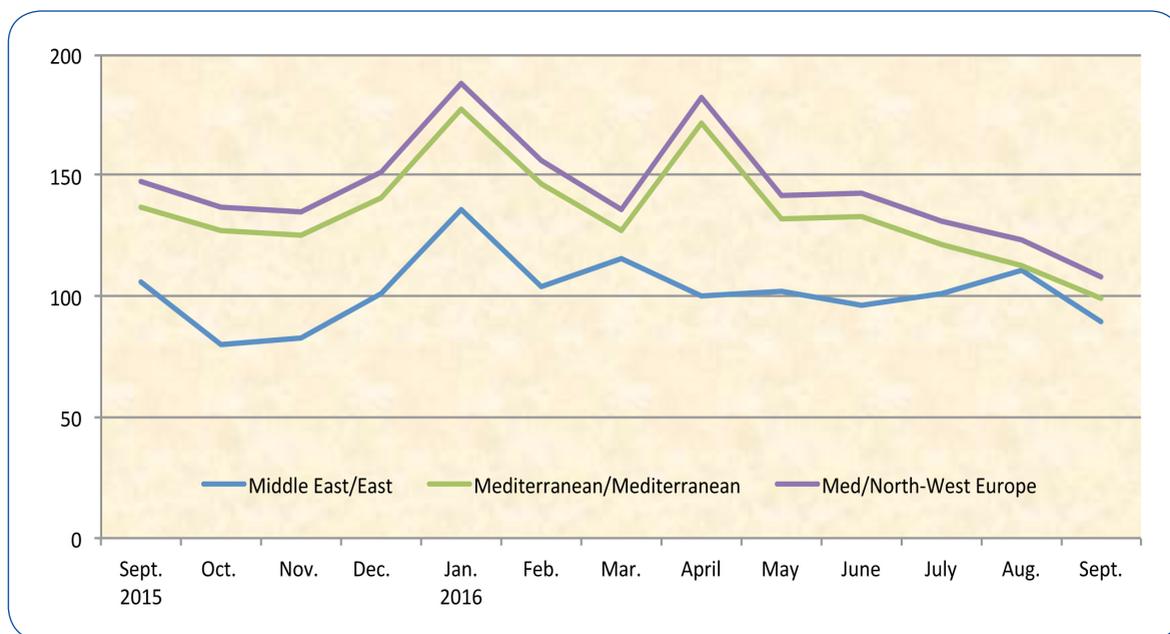


Table (5) and (6) in the annex show crude and products Tankers Freight Rates, 2014-2016.

2. Supply and Demand

Preliminary estimates in October 2016 show an increase in world oil demand by 0.6% or 0.6 million b/d, comparing with the previous month level to reach 97.6 million b/d, representing an increase of 1.6 million b/d from their last year level.

Demand in OECD countries decreased by 0.2% or 0.1 million b/d comparing with their previous month level to reach 46.8 million b/d, representing an increase of 0.7 million b/d from their last year level. Whereas demand in Non-OECD countries increased by 1.4% or 0.7 million b/d comparing with their previous month level to reach 50.8 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 October 2016 increased by 0.9% or 0.9 million b/d, comparing with the previous month to reach 99.8 million b/d, representing an increase of 2.7 million b/d from their last year level.

In October 2016, OPEC crude oil and NGLs/condensates total supplies increased by 1% or 0.4 million b/d comparing with the previous month level to reach 40.8 million b/d, a level that is 1.8 million b/d higher than last year. Preliminary estimates show that Non-OPEC supplies increased by 0.9% or 0.5 million b/d comparing with the previous month level to reach 59 million b/d, a level that is 0.8 million b/d higher than last year.

Preliminary estimates of the supply and demand for October 2016 reveal a surplus of 2.2 million b/d, compared to a surplus of 1.9 million b/d in September 2016 and a surplus of 1.1 million b/d in October 2015, as shown in table (2) and figure (6):

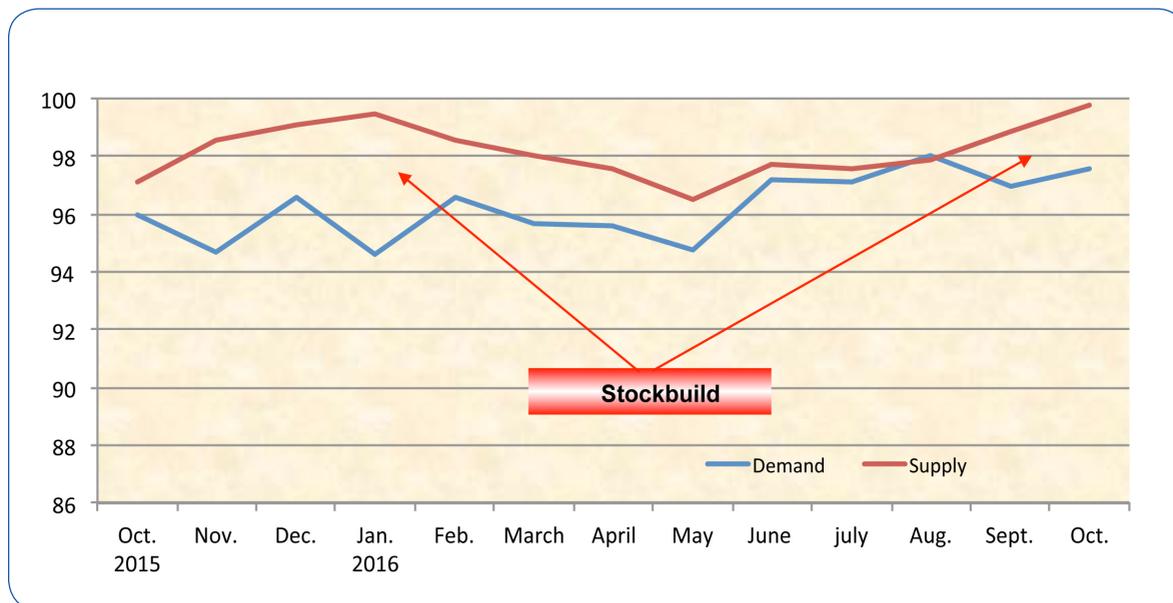
	<i>October 2016</i>	<i>September 2016</i>	<i>Change from September 2016</i>	<i>October 2015</i>	<i>Change from October 2015</i>
<i>OECD Demand</i>	46.8	46.9	-0.1	46.1	0.7
<i>Rest of the World</i>	50.8	50.1	0.7	49.9	0.9
<i>World Demand</i>	97.6	97.0	0.6	96.0	1.6
<i>OPEC Supply:</i>	<u>40.8</u>	<u>40.4</u>	<u>0.4</u>	<u>39.0</u>	<u>1.8</u>
<i>Crude Oil</i>	33.9	33.5	0.4	32.2	1.7
<i>NGL's & Cond.</i>	6.9	6.9	0.0	6.8	0.1
<i>Non-Opec Supply</i>	56.5	56.0	0.5	56.0	0.5
<i>Processing Gain</i>	2.5	2.5	0.0	2.2	0.3
<i>World Supply</i>	99.8	98.9	0.9	97.1	2.7
<i>Balance</i>	2.2	1.9		1.1	

Source: Energy Intelligence Briefing November 7, 2016.

Tables (7) and (8) in the annex show world oil demand and supply for the period 2014-2016.

Figure - 6 World Supply and Demand

(Million b/d)



US tight oil production

In October 2016, US tight oil production decreased by 53 thousand b/d or 1.2% comparing with the previous month level to reach 4.550 million b/d, representing a decrease of 700 thousand b/d from their last year level. The US oil rig count increased by 15 rig comparing with the previous month level to reach 367 rig, a level that is 153 rig lower than last year, as shown in table (3) and figure (7):

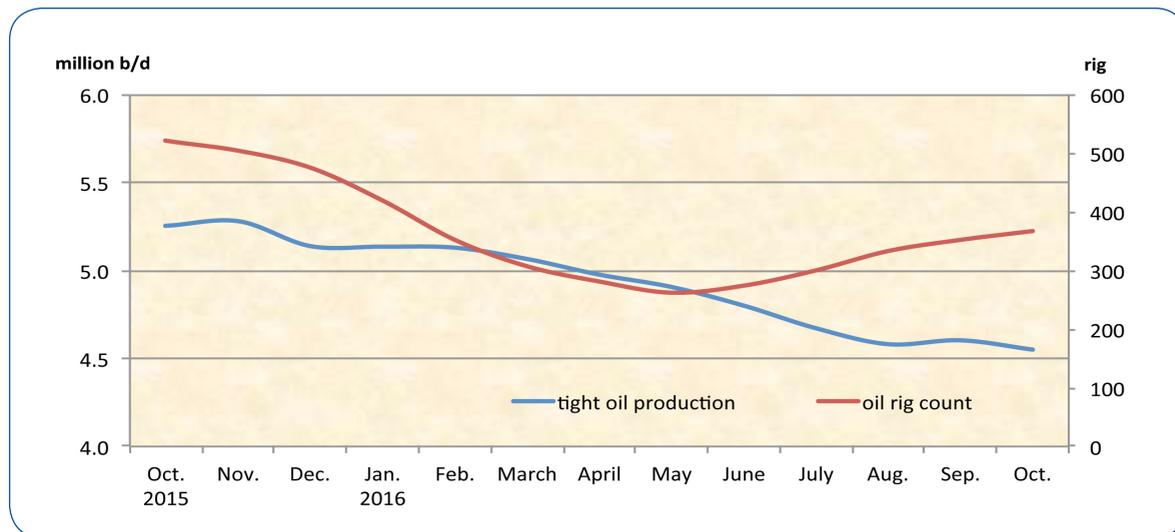
Table 3 US* tight oil production

(Million b/d)

	October 2016	September 2016	Change from September 2016	October 2015	Change from October 2015
tight oil production	4.550	4.603	-0.053	5.250	-0.700
Oil rig count (rig)	367	352	15	520	-153

Source: EIA, Drilling Productivity Report for key tight oil and shale gas regions, November 2016.
 * focusing on the seven most prolific areas, which are located in the Lower 48 states. These seven regions accounted for 92% of domestic oil production growth during 2011-2014 (Bakken, Eagle Ford, Haynesville, Marcellus, Niobrara, Permian, Utica)

Figure - 7 US tight oil production and oil rig comt (Million b/d)



3.Oil Trade

USA

In September 2016, US crude oil imports decreased by 560 thousand b/d or 6.6% comparing with the previous month level to reach 8 million b/d, and US oil products imports decreased by 96 thousand b/d or 4.3% to reach about 2.2 million b/d.

On the export side, US crude oil exports decreased by 194 thousand b/d or 28.4% comparing with the previous month level to reach about 488 thousand b/d, whereas US products exports increased by 690 thousand b/d or 17.3% to reach 4.7 million b/d. As a result, US net oil imports in September 2016 were 1.2 million b/d or nearly 18.8% lower than the previous month, averaging 5 million b/d.

Canada remained the main supplier of crude oil to the US with 41% of total US crude oil imports during the month, followed by Saudi Arabia with 15%, then Venezuela with 9%. OPEC Member Countries supplied 39% of total US crude oil imports.

Japan

In September 2016, Japan’s crude oil imports increased by 30 thousand b/d or 1% comparing with the previous month to reach 3.2 million b/d. Whereas Japan oil products imports decreased by 142 thousand b/d or 24.7% comparing with the previous month to reach 433 thousand b/d.

On the export side, Japan’s oil products exports increased in September 2016, by 14 thousand b/d or 2.2% comparing with the previous month, averaging 662 thousand b/d. As a result, Japan’s net oil imports in September 2016 decreased by 125 thousand b/d or 4% to reach 3 million b/d.

Saudi Arabia was the big supplier of crude oil to Japan with a share of 32% of total Japan crude oil imports, followed by UAE with 26% and Qatar with 10% of total Japan crude oil imports.

China

In September 2016, China's crude oil imports increased by 310 thousand b/d or 4% to reach 8.1 million b/d, Whereas China's oil products imports remained almost stable at the same previous month level of 1.2 million b/d.

On the export side, China's crude oil exports reached 106 thousand b/d, the highest level since March 2016. And China's oil products exports increased by 186 thousand b/d or 19% to reach 1.2 million b/d. As a result, China's net oil imports reached 7.9 million b/d, representing an increase of 0.9% comparing with the previous month level.

Angola was the big supplier of crude oil to China with 13% of total China's crude oil imports during the month, followed by Iraq with 12%, and Russia with 11%.

Table (4) shows changes in crude and oil products net imports/(exports) in September 2016 versus the previous month:

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

	Crude Oil			oil Products		
	September 2016	August 2016	Change from August 2016	September 2016	August 2016	Change from August 2016
USA	7.491	7.857	-0.366	-2.526	-1.740	-0.786
Japan	3.236	3.206	0.030	-0.229	-0.074	-0.155
China	7.961	7.706	0.255	-0.023	-0.158	-0.181

Source: OPEC Monthly Oil Market Report, various issues 2016.

4. Oil Inventories

In September 2016, OECD commercial oil inventories decreased by 17 million barrels to reach 3068 million barrels – a level that is 115 million barrels higher than a year ago. It is worth mentioning that during the month, commercial crude inventories in OECD decreased by 2 million barrels to reach 1179 million barrels, and commercial oil products inventories decreased by 15 million barrels to reach 1889 million barrels.

Commercial oil inventories in Americas decreased by 15 million barrels to reach 1619 million barrels, of which 623 million barrels of crude and 996 million barrels of oil products. Commercial oil Inventories in Europe decreased

by 9 million barrels to reach 999 million barrels, of which 356 million barrels of crude and 643 million barrels of oil products. Commercial oil inventories in Pacific increased by 7 million barrels to reach 450 million barrels, of which 200 million barrels of crude and 250 million barrels of oil products.

In the rest of the world, commercial oil inventories decreased by 4 million barrels to reach 3056 million barrels, whereas the Inventories at sea increased by 7 million barrels to reach 1215 million barrels.

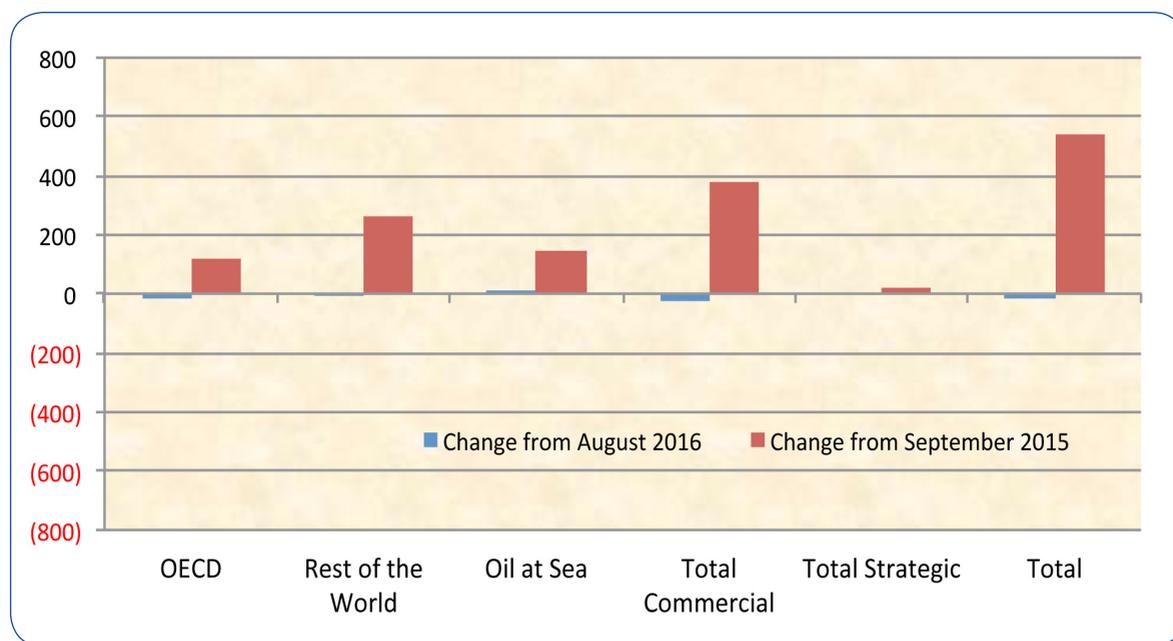
As a result, Total Commercial oil inventories in September 2016 decreased by 21 million barrels comparing with the previous month to reach 6124 million barrels – a level that is 377 million barrels higher than a year ago.

Strategic inventories in OECD-34, South Africa and China remained stable at the same previous month level of 1870 million barrels – a level that is 18 million barrels higher than a year ago.

Total world inventories, at the end of September 2016 were at 9209 million barrels, representing a decrease of 14 million barrels comparing with the previous month, and an increase of 540 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 September 2016.

Figure - 8 Changes in Global Inventories at the End of September 2016 (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 October 2016 decreased by \$0.01/million BTU comparing with the previous month to reach \$2.98/ million BTU.

The comparison, shown in table (5), between natural gas prices and the WTI crude reveal differential of \$5.6/ million BTU in favor of WTI crude.

Table 5 Henry Hub Natural Gas, WTI Crude Average, and Low Sulfur Fuel Oil Spot Prices, 2015-2016 (Million BTU¹)

	Oct. 2015	Nov.	Dec.	Jan. 2016	Feb.	Mar.	Apr. 2016	May	June	July	Aug.	Sep.	Oct.
Natural Gas ⁽²⁾	2.3	2.1	1.9	2.3	2.0	1.7	1.9	1.9	2.6	2.8	2.8	2.8	3.0
WTI Crude ⁽³⁾	8.0	7.4	6.4	5.4	5.2	6.5	7.1	8.1	8.4	7.7	7.7	7.8	8.6

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 September 2016, the price of Japanese LNG imports increased by \$0.4/ million BTU comparing with the previous month to reach \$7.1/ million BTU, the price of Korean LNG imports increased by \$0.4/million BTU comparing with the previous month to reach \$6.8/ million BTU, and the price of Chinese LNG imports increased by \$0.1/million BTU comparing with the previous month to reach \$6.1/ million BTU.

2.2. LNG Imports

Total Japanese, Korean and Chinese LNG imports from various sources, decreased by 3.8% or 450 thousand tons from the previous month level to reach 11.434 million tons.

Table (6) shows the prices and quantities of LNG imported by Japan, South Korea, and China for the period 2014-2016.

Table 6 LNG Prices and Imports: Korea, Japan, and China 2014-2016

	Imports (thousand tons)				Average Import Price (\$/million BTU)		
	Japan	Korea	China	Total	Japan	Korea	China
2014	88505	37402	19891	145798	16.1	16.3	11.7
2015	84850	33141	19606	137597	10.2	10.6	8.6
January 2015	8434	4122	2121	14677	15.1	14.3	11.1
February	7730	3098	1661	12489	13.3	13.4	10.3
March	8137	3048	1346	12531	12.2	13.1	10.1
April	6598	2839	1545	10982	10.2	11.7	8.1
May	5755	2364	1123	9242	8.7	9.5	8.8
June	6633	1777	1724	10134	8.6	9.1	9.5
July	6953	2271	1922	11146	8.9	8.8	7.5
August	7062	1998	1348	10408	9.2	9.2	7.1
September	6853	2450	1295	10598	9.6	9.6	7.4
October	6057	2915	1602	10574	9.4	9.7	8.0
November	6694	2706	1818	11218	8.9	9.5	7.9
December	7944	3553	2101	13598	8.5	8.7	7.6
January 2016	7245	3338	2464	13047	7.9	8.0	7.3
February	7370	2998	1801	12169	8.0	7.8	6.9
March	7959	3282	1702	12943	7.2	7.3	6.6
April	6382	2177	1861	10420	6.4	6.6	6.6
May	5455	2218	1425	9098	5.9	6.0	6.3
June	6193	2484	2146	10823	6.0	5.7	6.0
July	6460	1918	1604	9982	6.3	5.9	5.4
August	7656	1971	2257	11884	6.7	6.3	6.0
September	6671	2236	2527	11434	7.1	6.8	6.1

Source: World Gas Intelligence various issues.

2.3. Sources of LNG imports

Australia was the big supplier of LNG to Japan, Korea and China with 3.320 million tons or 29% of total Japan, Korea and China LNG imports in September 2016, followed by Qatar with 21.1% and Malaysia with 13.9%.

The Arab countries LNG exports to Japan, Korea and China totaled 3.152 million tons - a share 27.6% of total Japanese, Korean and Chinese 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 \$5.05/million BTU at the end of September 2016, followed by Indonesia with \$4.97/million BTU then Australia with \$4.93/million BTU. And LNG Qatar's netback reached \$4.80/million BTU, and LNG Algeria's netback reached \$4.51/million BTU.

Table (7) shows LNG exporter main countries to Japan, South Korea, and China and their netbacks at the end of September 2016.

Table7 LNG Exporter Main Countries To Japan, Korea and China, And Their Netbacks At The End Of September 2016

	Imports (thousand tons)				Spot LNG Netbacks at NE Asia Markets (\$/million BTU)
	Japan	Korea	China	Total	
Total Imports, of which:	6671	2236	2527	11434	
Australia	1904	244	1172	3320	4.93
Qatar	1090	1107	219	2416	4.80
Malaysia	1199	176	219	1594	4.92
Indonesia	498	265	510	1273	4.97
Russia	603	64	65	732	5.05

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

A decorative horizontal band with a dark olive green background. It features a complex pattern of mathematical symbols and numbers in a lighter, semi-transparent olive green color. The symbols include various numbers (0, 1, 2, 3, 4, 5, 9), mathematical operators (plus, minus, multiplication, division), and geometric shapes like circles and squares. The text is arranged in a somewhat chaotic but rhythmic pattern across the band.

Tables Annex

