DOWNSTREAM INDUSTRIES IN OAPEC MEMBER COUNTRIES...
REALITY AND FUTURE

HE ALI AL NAIMI

OIL DEMAND STILL STRONG
AND WILL KEEP GROWING

FIRST SUEZ CANAL GLOBAL CONFERENCE
SUEZ CANAL’S PIVOTAL ROLE IN SUPPORTING
EGYPTIAN ECONOMY AND GLOBAL TRADE
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.
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.
OAPEC member countries spare no effort in supporting and developing petroleum and downstream industries (refining and petrochemicals) due to their significance as strategic industries in terms of securing domestic market needs of petroleum and petrochemical products on one hand, and the generous revenues that oil products generate when exported to foreign markets on the other hand.

OAPEC members enjoy various potentials for setting up refining and petrochemical projects, including possessing huge oil and natural gas reserves, their geographical proximity to the world’s major consumer markets and international waterways, the availability of infrastructure like crude and oil products pipelines, in addition to modern export ports that are designed in line with the best world standards.

Total primary distillation capacities in the Arab countries’ oil refineries registered a considerable increase by the end of 2015 compared to 2014. The increase resulted from operating two new refineries; KSA’s Yasref refinery, and UAE’s Ruwais-2 refinery; in addition to increasing the refining capacity of Basra refinery in the Republic of Iraq. The total primary distillation capacities of the 54 refineries in OAPEC member countries have reached about 8.53 million b/d.
Studies project that these projects would contribute to raising the Arab refining capacity from about 9.3 million b/d in 2015 to about 13.86 million b/d in 2018.

Downstream industries in OAPEC member countries have been facing many challenges that led to shrinking their profitability and contributed to the delay or postponement of some projects. On top of these challenges comes the difficult economic situation in most OAPEC members due to the drop of oil prices. Then comes the price difference between the heavy and light crude which complicates decision making on the best type to be chosen for a refinery, in addition to the continuous increase of energy consumption costs in the oil refining industry, and the huge financial burden for meeting environmental legislations.

There is no doubt that meeting environmental legislations, especially in connection to producing oil products that conform to global standards, and taking measures to stop emissions resulting from refining, whether in gas or liquid forms, and disposing them in a safe way, all come on top of OAPEC member countries’ priorities. This is stemming from their deep belief in protecting the environment in the first place.

Facing these increasing challenges requires implementing more scientific solutions, on top of which comes modern technology through technology transfer and scientific research support.

As part of its interest in following up on current developments in the downstream industry and the importance of implementing modern technology to improve performance and profitability, OAPEC Secretariat General will organize a conference entitled “Latest Advancements in Refining and Petrochemical Industries” in Manama, Bahrain, from 17 to 19 April 2016, under the patronage of Bahrain’s Energy Minister HE Dr Abdul Hussein Mirza. The event will be organized in cooperation with Japan Cooperation Center Petroleum (JCCP) and Bahrain’s National Oil and Gas Authority (NOGA) that worked on providing all requirements and facilities to organize the conference at its best.

The conference will discuss various current downstream topics through papers prepared by refining and petrochemicals experts at OAPEC member countries. The Secretariat General hopes that such conferences and scientific efforts could contribute to developing the downstream industry in the member countries.
HE ALI AL NAIMI

OIL DEMAND STILL STRONG AND WILL KEEP GROWING

Saudi Arabia Petroleum and Mineral Resources Minister HE Ali Al Naimi stressed his country’s keenness on balancing the oil market, and its commitment to meeting a large portion of the world’s energy demand on purely commercial basis, while reiterating that KSA had no plans to seek larger share in the oil market.

In his speech at the IHS CERAWeek, held recently in the USA, the Minister said that the oil market witnessed various developments, changes, prosperity and recession periods over the past decades, which only stress that oil, as an industry and a good, is just like other goods exposed to be affected by the market conditions.

Al Naimi said that oil demand was, and remains, strong. The world’s daily oil demand is currently more than 90 million b/d and it will rise on the long run so there are no concerns over demand. Therefore, the Minister welcomed any sources of supply, including from shale plays.

Al Naimi then spoke about the kingdom’s petroleum policy stressing that the kingdom
remains committed to meeting the demand of its customers and injecting huge investments in the petroleum industry. It also wants to maintain its level of spare capacity and will jump in during any type of crisis to meet the world’s demand.

Addressing climate change and his country’s participation in the COP21 negotiations, Al Naimi explained that the world recognizes the threat posed by climate change and the importance of reaching technical solutions for this phenomenon’s challenges. Investing in technologies like carbon capture and storage and renewable energy resources remains paramount. Also, taking serious measures on improving energy efficiency in the various economic sectors is vital.

Al Naimi drew the attention to the widely popular but incorrect post-COP21 belief that fossil fuels are harmful and should simply be left in the ground. It is not fair and not right. The minister stressed the great importance of fossil fuels and their contribution over more than two centuries in transforming the world economy. The problem is not fossil fuels themselves, but the emissions caused when burning them, he said.
Qatar’s Minister of Energy and Industry HE Dr Mohammed bin Saleh Al Sada stressed that his country believe that man is the focal point for development, and that the joint Arab action is the most ideal means for the progress of Arabs.

In his speech at the opening of the ‘Electricity and Water Desalination in Arab Countries’ conference held recently in Doha, Qatar, the Minister added that the huge progress in the world reiterates the importance of electricity in our daily life. Electricity power usage is a basic index for measuring the success of the economic and social development process.

The Minister demonstrated Qatar’s future plans and projects to develop the electricity and water sectors depending currently on natural
AL SADA: DOHA TO HOST OIL PRODUCERS MEETING IN APRIL 2016

HE the Minister of Energy and Industry and current President of the Organization of the Petroleum Exporting Countries (OPEC) Dr Mohammed Bin Saleh Al Sada announced a meeting of OPEC and key non-OPEC producer countries will be held in Doha on 17 April 2016.

In a press statement released by Qatar’s Ministry of Energy and Industry, the Minister said that to date, around 15 OPEC and non-OPEC producers, accounting for about 73% of global oil output, support the initiative launched last February on freezing oil output at January 2016 levels.

Qatar, Saudi Arabia, Russia and Venezuela proposed in a meeting held last month in Doha to freeze oil output at January 2016 levels and called on other producers to do so.

HE the Minister of Energy and Industry said that the continuous efforts of the Qatar Government, have been instrumental in promoting dialogue among all oil producers to support the Doha initiative, helping the stabilization of oil market to the interest of all.

Since February 2016 Meeting, Qatar, as the President of OPEC, has been coordinating with OPEC and non-OPEC oil producer countries to gather more support for the Doha initiative to stabilize the market. The proposal is being increasingly supported by both OPEC and non-OPEC countries including Saudi Arabia and Russia.

It is worth noting that the earlier Doha meeting held back in February changed the sentiment of the oil market and put a floor under the oil price. This has triggered a broad and intensive dialogue between all oil producers out of the conviction that current oil prices are not sustainable.

This is evident by the unprecedented drop in investment in the oil industry, which has indeed started to impact oil production worldwide, showing a decline that seems likely to continue. This reduction in investment is already taking its toll on the oil industry as a whole.
Bahrain’s Energy Minister HE Dr Abdul Hussain bin Ali Mirza said that hosting the conference on “Latest Advancements in Refining and Petrochemical Industries”, organized by OAPEC, in collaboration with Bahrain’s National Oil and Gas Authority (NOGA) from April 17 to 19, recaps previous successful conferences co-organized by the two sides.
The minister added that the conference will shed light on the latest developments and the possibility to avail of the opportunities in the countries in the region to further boost performance in the refining and petrochemical industries due to its significance to the region’s countries, especially the oil-rich Gulf countries.

HE Mirza pointed out that this event is an important gathering and a good opportunity to exchange expertise, information, and views that contribute to the development and prosperity of the downstream industries. The conference will tackle a number of topics including the following:

- Comprehensive review on current and future prospects of the refining and petrochemicals industries
- Technological challenges and developments in the refining and petrochemicals industries
- Conversion processes technology to maximize the output of oil refineries and high-value light petroleum products
- Boosting cleaner petroleum fuel production opportunities
- Modern trends in integration between the refining and petrochemicals industries
- Programmes on improving performance and profitability in the refining and petrochemicals industries; like rationalizing and improving energy efficiency, and corrosion management programmes
- Improving maintenance operations, cost reduction strategies, health and safety and environment management, as well as handling crude oils and other feedstock challenges.
- The role of research and development in improving the performance of the refining and petrochemicals industries.
- Successful case studies of new development and expansion projects will be presented.

HE Mirza explained that NOGA seeks to attract more international and specialized conferences and exhibitions in connection to oil, gas, and energy to Bahrain. NOGA strategic plans go in line with the Bahraini government’s efforts to boost Bahrain’s position in the global events and activities’ market to hit a number of targets including labour force development and human resources motivation, as the latter is considered Bahrain’s sustainable wealth.

The conference programme includes a field visit to an oil company site to allow participants to look into the most important achievements and ambitious plans and projects in various aspects.
Algerian energy company Sonatrach announced it will invest $3.2 billion during the period from 2016 to 2020, including investing $530 million in 2016 to increase pipeline capacity as natural gas output rises from new and existing fields. The new investments include building 1,650km of pipeline, and six compression and pumping stations. The company wants to guarantee increased supplies to European clients.

On another note, Sonatrach has awarded an $880 million contract to supply oil and gas drilling tubes, and energy transport to four foreign firms; they are Germany’s CCC Machinery, the Netherlands’ Van Leeuwen, Japan’s Marubeni-Itochu, and France’s Vallourec Tubes.

TRILATERAL PETROLEUM DISCUSSIONS IN CAIRO BETWEEN EGYPT, IRAQ, AND JORDAN

On 10 March 2016, extensive discussions were held in Egypt including Egypt’s Petroleum Minister HE Tariq Al Mulla, Iraq’s Oil Minister HE Adel Abdul Mahdi, and Jordan’s Energy and Mineral Resources Minister HE Dr Ibrahim Seif. The discussions aimed at boosting joint cooperation among the three countries in all petroleum activities, within the framework of activating regional cooperation, supporting joint petroleum and gas projects, and finding means to enhance mutual interests.

HE Al Mulla hailed the positive outcome of the meeting. He reiterated keenness on developing cooperation and utilizing available resources and expertise in executing petroleum and gas mega projects and developing human resources and training. He added that maximizing the use of the available infrastructure in the three countries and boosting economic integration through developing the petroleum resources are a strategic goal.

On his part, HE Abdul Mahdi stressed the keenness of the participating countries on supporting joint cooperation to execute giant strategic projects that would contribute to the economic growth for larger sectors other than petroleum which would benefit the three countries. He explained that cooperation with Egypt would mean significant economic benefits for both countries in light of a balanced commercial relationship. Through such outcomes, Iraq will find new outlets to export and market its output to external markets by using Egypt’s oil refining and transport infrastructure.

In the same vein, the Egyptian and Iraqi ministers signed an MOU to boost joint collaboration in the petroleum and gas industry. The MOU includes considering the possibility of the Egyptian petroleum sector to refine volumes of Basra light crude, and store Iraqi oil in Egypt through using the Egyptian infrastructure and crude and products storing facilities in Ain Sukhna port in the Red Sea and Sidi Krair port in Alexandria.

The MOU also included the possibility of importing Basra light crude on a monthly basis by Egypt; training Iraqi human resources at Egyptian training centers; cooperation in the fields of gas industry and the drilling of petroleum and gas wells; building domestic household gas networks, and creating partnerships with Egyptian companies in executing petroleum and gas projects in Iraq. It was also agreed to form a joint action taskforce between the two sides to study the mechanism for executing the aforementioned aspects of cooperation that serve the interests of the two countries.
AL ZOUR REFINERY: WORLD’S LARGEST DESULFURIZATION COMPLEX

The Kuwaiti oil industry has entered a new historical era with the signing of the strategic Al Zour Refinery project, 90 km south Kuwait City, mid-October 2015. The project’s initial due date is July 2019. Initial operations are planned to be launched in December 2018. The project aims to position Kuwait Petroleum Corporation (KPC) among the world leading refining companies in terms of refining capacity and producing special types of clean fuel in line with global environmental standards.

The project, which will be set up across an area of 16 square km, will contribute to increasing Kuwait’s refining capacity to 1.41 million b/d. Al Zour refinery is one of the world’s largest refining units with a planned capacity of 615,000 b/d. 225,000 b/d of low-sulfur clean fuel will be supplied to power plants inside Kuwait.

According to KPC, the new refinery is designed in line with the latest global technological, health, safety, and environmental standards. It has the capacity to refine all types of oils produced in Kuwait, including Kuwait export crude and heavy oils.

The project will benefit the Kuwaiti economy via the integration between the new refinery and the new petrochemicals project to be constructed on the same area.

KPC added that the new refinery is designed as three small refineries to provide flexibility in operation. Each refinery will have some independent units; together they will constitute the largest desulfurization complex in the world. A storage capacity of 6.5 million barrels of Low Sulfur Fuel Oil is used to maintain a strategic stock of fuel for the different seasons and needs.

KPC said 4 consortia of European and Asian specialized companies will lead the construction of the refinery over 5 stages. 

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Conference on

Latest Advancements in Refining and Petrochemical Industries

Kingdom of Bahrain: 17-19 April 2016

www.oapecorg.org
SUCCESSFUL LISTING OF APICORP SUKUK ON NASDAQ DUBAI

In a step reflecting the solid economic position of the company, Dr Aabed Al Saadoun, Chairman of the Arab Petroleum Investments Corporation (APICORP), rang the market-opening bell to celebrate the listing of a $500 million Sukuk on Nasdaq Dubai on 8 March 2016. The total nominal value of Sukuk currently listed in Dubai has now reached $37.81 billion. The bell-ringing ceremony was attended by a group of officials in the Dubai financial sector and APICORP.

Dr Aabed Al Saadoun, Chairman of APICORP, said: “A listing on one of the Middle East’s premier financial exchanges provides our inaugural Sukuk with global and regional visibility, together with world class regulation. As a multilateral development bank dedicated to supporting the energy sector with priority given to Arab joint ventures that benefit the members’ states, we look forward to making further use of Islamic financing instruments to fund our initiatives for the benefit of Arab economies.”

He added that APICORP’s Sukuk is the first to be issued under a $3 billion Sukuk programme that the bank announced in July 2015, aimed at diversifying its funding sources and reducing its overall cost of financing. This would reinforce APICORP’s capacity to achieve more development in the energy sector in the Arab countries.
FIRST SUEZ CANAL GLOBAL CONFERENCE
SUEZ CANAL’S PIVOTAL ROLE IN SUPPORTING EGYPTIAN ECONOMY AND GLOBAL TRADE

Upon an invitation by the organizing committee, OAPEC Secretary General HE Abbas Ali Al Naqi, took part in the “First Suez Canal Global Conference”, organized by Suez Canal Authority, in collaboration with the Transportation Ministry, the International Cooperation Ministry, and the General Authority for the Suez Canal Economic Zone, under the slogan “Opportunities and Challenges”, from 22 to 24 February 2016. The event was held under the high patronage of the Egyptian President HE Abdul Fattah Al Sisi. Egypt’s Prime Minister HE Sherif Ismail inaugurated the event on behalf of the president. The event was attended by a large number of navigation, shipping, and maritime officials and experts, in addition to, ports and logistics experts, academics, and commerce chambers representatives from 15 Arab and foreign countries.

HE Ismail inaugurated the conference by a speech welcoming the participants and wishing them a pleasant stay in Egypt. He considered the new Suez Canal project the best representation of the conference’s slogan “Opportunities and Challenges” which proved Egypt’s determination to beat challenges. The project is a part of an ambitious plan to restore the Egyptian economy; it will be the springboard for a strategic development plan in the canal’s area, which plays a significant role in the world shipping and trade movement via the canal. The project aims at reducing the waiting time, which would have positive outcome on the transport economies of the canal that could remain the first option for the world trade movement.

HE Abbas Ali Al Naqi chaired the fourth session on the first day of the conference entitled “Energy Outlook and the Suez Canal”. HE Al Naqi gave a speech that presented the world demand prospects and the oil movement through water channels. The fourth session included 3 discussion panels as follows:

1) Panel 1: LNG Markets and the Suez Canal
   • The International Group of LNG Importers (GIIGNL)
   • LNG & the LNG Chain
   • LNG Markets- current and future
   • LNG traffic and the Suez Canal- history, present, and future
   • Vision for the future-conclusion and key messages

2) Panel 2: Energy Shipping-the New Suez Canal
   • Overall commentary on Energy Outlook and Suez Canal
   • Incorporate what to look out for in protecting the interests of shipping
3) Panel 3: Impact of energy market on shipping industry

- Low oil prices, a blessing or a curse for the shipping industry
- Impact of energy prices on our industry in the short and long-terms
- How to react

On his part, HE Dr Ahmed Darwish, Chairman, General Authority for the Suez Canal Economic Zone, presented the future vision for the Suez Canal investment, which focuses on two aspects; firstly, amending the economic zones law, by which the General Authority for the Suez Canal Economic Zone has been established; and secondly, establishing the Suez Canal Economic Zone over a space of 461 km², which is a very large area compared to other competitive economic zones worldwide. Darwish asserted that there is a plan to link six harbors to boost Egypt’s rank among the world’s economic zones. These harbors include East Port Said, West Port Said, Al Tour, Al Adabiayah, Al Ain Al Sokhna, and Western Qantara.

Chairman of Suez Canal Authority (SCA) Lt. General Mohab Mamish said in his speech at the conference that the First Suez Canal Global Conference would achieve many objectives and enhance the role of the Suez Canal in the service of international trade and the Egyptian economy through continued and direct interaction between the SCA and the operators of the maritime transport industry. Mamish said the conference will discuss over several working sessions the challenges facing the Suez Canal and the Egyptian maritime transport as well as the available investment opportunities provided by the Suez Canal development project in view of the promising plans of the Egyptian government to increase growth rates and provide more jobs for youths.

Secretary General of the Conference Mr. Nagi Ahmed Amin said that the Suez Canal Authority administration is always seeking to develop the international waterway and offer better services and safe passages to clients to increase transit rates and effectively contribute to boosting world trade movement and economy.

Among the main topics tackled at the conference:
- The changes in the world economy and the impact on the world trade
- Recent developments in the shipping industry
- Dry bulk outlook and the Suez Canal
- Energy outlook and the Suez Canal
- Development of the Suez Canal area together with ports and logistics

The conference comes in line with the Canal Authority’s policy on boosting relations with its clients and major players in the maritime and shipping sectors to improve the Canal’s services. The conference compliments the Suez Canal’s role in supporting the navigation and shipping industries. It provides a good opportunity to explore available investment opportunities and the sector’s challenges.
In the Name of Allah the Most Gracious Most Merciful
Excellencies,
Ladies and Gentlemen,
Honorable Audience,
Assalamu Alaykom and good evening,

I would like to begin my speech with thanking the Suez Canal Authority for extending the invitation to the Organization of Arab Petroleum Exporting Countries (OAPEC) to take part in this important conference under the high patronage of HE President Abdul Fattah Al Sisi, and the presence of a group of maritime and shipping experts and leaders. I would also like to take this opportunity to thank the organizers for the warm and hospitable welcome and good preparation; wishing the conference all success.

The fourth session tackles the “Energy Outlook and the Suez Canal”. It is a vital topic as the world energy prospects link to the projected increase in the world’s population, and the projected growth in the world economy by 3.6% per annum during the period 2014 - 2040. Many sources indicate that the world demand for energy is projected to
increase by 47% by 2040. There will be a need for all kinds of energy (renewable, nuclear, and coal), and of course oil and gas that are expected to remain the main source for energy. Combined together, they would claim about 53% of the world energy mix by 2040 compared to 25% for coal, 6% for nuclear, 2.5% for hydropower, 9.5% for biomass, while other renewables’ share (wind and solar) would remain low at about 4% of the energy mix.

There is an excessive energy in the oil and natural gas resources that is capable of meeting the projected future needs. The world’s proven reserves currently are about 1293 billion barrels, 55% of which are in the Arabian region. As for natural gas, world reserves reached about 201 trillion cubic meters, 27% of that total is claimed by the Arabian region.

Ladies and Gentlemen,

The significance of the oil movement via the world’s various narrow maritime channels and canals lies in the fact that it is a decisive and important part of the world’s energy security. The volume of oil shipped through the sea is about 63% of the world’s oil output. The world energy markets depend largely on shipping oil through these outlets in a smooth way and without any obstacles that might abrupt its transportation. Any disturbance at these outlets, even if temporary, would inevitably lead to increasing energy costs in general.

As for the oil and petroleum products movement via the Suez Canal, data issued by the Suez Canal Authority show that petroleum shipments (crude oil and refined products) and LNG shipments (whether northward or southward) during the period from January to December 2015 have represented about 22% and 3.3% respectively of the total shipments passing via the Canal. The total oil volume that has passed via the Canal has reached 3.6 million b/d, representing 5.4% of the world maritime oil trade currently. About 17483 ships have passed through the Suez Canal during the period from January to December 2015, 24.7% of which were oil tankers and 3.8% LNG tankers.

There is no doubt that the Canal development project launched by Egypt recently will boost the Canal’s importance as an international passage for more petroleum shipments heading towards different consuming areas.

Assalamu Alaykom
THE ROLE OF HEAVY OIL IN MEETING THE WORLD’S ENERGY DEMAND

OAPEC Secretariat General released a study recently entitled “The Role of Heavy Oil in Meeting the World’s Energy Demand”. It aims at highlighting heavy oil, its resources, and its production methods in order to stress its important position among the different oils mix produced worldwide.

The study indicates that the growing oil demand is one of the most significant reasons that led to the increasing attention given to developing heavy oil resources worldwide. Technological development in all aspects of the petroleum industry helped facilitating heavy oil investments due to playing down a number of technical challenges that hindered heavy oil production.

The study explains that oil prices play a significant role in encouraging efforts on exploring various energy resources. It states that current conditions emphasize that fossil fuel resources will remain one of the most important resources of the global energy mix. This makes heavy oil part and parcel of the feedstock mix that feeds a large number of refineries worldwide.

The study reviews the differences between heavy oil and other crudes, including the percentage of light components compared to heavy components like asphalt found in heavy oil. This represents an additional burden on production, transportation, and refining, which is then interpreted in the form of higher costs and lower prices compared to light or medium oils.

The study draws the attention to the increasing impact of heavy oils over the energy markets now and in the future in light of the rapid changes in the world’s energy scene governed by oil and gas price fluctuations on the one hand; and the increasing growth of the world’s consumption market in general especially Asia and the Pacific in particular; in addition to the drop of European reserves on the other hand. The geopolitical developments also contribute to highlighting the role of such oils due to the disturbed conditions in some producing regions in the world. Moreover, some automatic technical factors lead to a drop in production rates in a number of giant fields.

The study concludes by stating that heavy oil projects in the Arab countries play an important role in producing heavy oil whether now or on the medium and long run, especially that current heavy oil production represents about 10% of the overall oil production.

The study stresses that the energy market instability causes concern among investors and hinders them from entering the heavy oil fields development projects. However; the growth in the medium and long term demand will accentuate the importance of heavy oil gradually, especially in the light of the drop in conventional oil production rates due to the maturity of fields and the natural decline of their production rates; in addition to the noticeable economic growth in East Asian countries.
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 January 2016, to reach $29.8/bbl, and continued to decline thereafter, to reach its lowest level of $23.7/bbl during the third week. During the fourth week, weekly average price raised to $26.9/bbl, as shown in figure 1:

On monthly basis, OPEC Reference Basket in January 2016, averaged $26.5/bbl, representing a decrease of $7.1/bbl or 21.1% comparing with previous month, and a decrease of $18/bbl or 40.3% from the same month of previous year. Enduring oversupply and the slowdown in the Chinese economy, were major stimulus for the decrease in oil prices during the month of January 2016, to their lowest levels since September 2003.

Key Indicators

- **In January 2016, OPEC Reference Basket decreased** by 21.1% or $7.1/bbl from the previous month level to stand at $26.5/bbl.
- **World oil demand** in January 2016, decreased by 2.1% or 2 million b/d from the previous month level to reach 94.6 million b/d.
- **World oil supplies** in January 2016, increased by 0.4% or 0.4 million b/d from the previous month level to reach 99.5 million b/d.
- **US tight oil production** in January 2016, decreased by 1.3% to reach 5.1 million b/d, and **US oil rig count decreased** by 56 rig from the previous month level to stand at 419 rig.
- **US crude oil imports** in December 2015, increased by 7.2% from the previous month level to reach 7.9 million b/d, and **US product imports increased** by 12.2% to reach about 1.8 million b/d.
- **OECD commercial inventories** in December 2015 increased by 8 million barrels from the previous month level to reach 3012 million barrels, and **Strategic inventories** in OECD-34, South Africa and China remained stable at the same previous month level of 1853 million barrels.
- **The average spot price of natural gas** at the Henry Hub in January 2016 increased by $0.35/million BTU from previous month level to reach $2.28/ million BTU.
- **The Price of Japanese LNG imports decreased** in December 2015 by $0.4/m BTU to reach $8.5/m BTU, the **Price of Korean LNG imports decreased** by $0.8/m BTU to reach $8.7/m BTU, and the **Price of Chinese LNG imports decreased** by $0.3/m BTU to reach $7.6/m BTU.
- **Arab LNG exports to Japan, Korea and China** were about 4.231 million tons in December 2015 (a share of 31.1% 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:

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Change in Price of the OPEC Basket of Crudes, 2015-2016 ($/bbl)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEC Basket Price</td>
<td>26.5</td>
</tr>
<tr>
<td>Change from previous Month</td>
<td>-7.1</td>
</tr>
<tr>
<td>Change from same month of previous Year</td>
<td>-17.9</td>
</tr>
</tbody>
</table>

* 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.

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 December 2015, the spot prices of premium gasoline decreased by 7.2% or $4.4/bbl comparing with their previous month levels to reach $56.6/bbl, spot prices of gas oil decreased by 21% or $11.4/bbl to reach $42.9/bbl, and spot prices of fuel oil decreased by 23.6% or $7.9/bbl to reach $25.6/bbl.
- **Rotterdam**

The spot prices of premium gasoline decreased in December 2015, by 10% or $6.5/bbl comparing with previous month levels to reach $58.8/bbl, spot prices of gas oil decreased by 20% or $11.4/bbl to reach $45.7/bbl, and spot prices of fuel oil decreased by 25.8% or $7.8/bbl to reach $22.4/bbl.

- **Mediterranean**

The spot prices of premium gasoline decreased in December 2015, by 11.9% or $7/bbl comparing with previous month levels to reach $51.8/bbl, spot prices of gas oil decreased by 19% or $10.9/bbl to reach $46.4/bbl, and spot prices of fuel oil decreased by 21% or $6.9/bbl to reach $25.9/bbl.

- **Singapore**

The spot prices of premium gasoline decreased in December 2015, by 5.9% or $3.5/bbl comparing with previous month levels to reach $55.6/bbl, spot prices of gas oil also decreased by 18.2% or $10.7/bbl to reach $48/bbl, and spot prices of fuel oil decreased by 21.9% or $7.9/bbl to reach $28.2/bbl.

**Figure (3)** shows the price of Premium gasoline in all four markets from December 2014 to December 2015.

**Figure - 3** Monthly Average Spot Prices of Premium Gasoline, 2014-2015

Table (4) in the annex shows the average monthly spot prices of petroleum products, 2014-2015.
1-3 Spot Tanker Crude Freight Rates

In December 2015, Freight rates for crude oil for tanker size (230-280 thousand deadweight tons (dwt)), leaving Middle Eastern ports to the East, increased by 25 points or 39.1% comparing with previous month to reach 89 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, increased by 15 points or 39.5% comparing with previous month to reach 53 points on the World Scale (WS), and freight rates for inter-Mediterranean for small to medium sized tankers (80-85 thousand deadweight tons (dwt)), increased by 7 points or 6.2% comparing with previous month to reach 120 points on the World Scale (WS).

Figure (4) shows the freight rates for crude oil to all three destinations from December 2014 to December 2015.

1-4 Spot Tanker Product Freight Rates

In December 2015, 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 18 points, or 21.7% comparing...
with previous month to reach 101 points on WS, freight rates for Petroleum Products across Mediterranean [for tanker size 30-35 thousand deadweight tons (dwt)], increased by 16 points, or 12.8% to reach 141 points on WS, and freight rates for petroleum products [for tanker size 30-35 thousand deadweight tons (dwt)], leaving Mediterranean to North-West Europe also increased by 16 points, or 11.9% to reach 151 points on WS.

Figure (5) shows the freight rates for oil products to all three destinations from December 2014 to December 2015.

Table (5) and (6) in the annex show crude and products Tankers Freight Rates, 2014-2015.

2. Supply and Demand

Preliminary estimates in January 2016 show a decrease in world oil demand by 2.1% or 2 million b/d, comparing with the previous month to reach 94.6 million b/d, representing an increase of 1.5 million b/d from their last year level.

Demand in OECD countries decreased by 2.6% or 1.2 million b/d comparing with their previous month level to reach 45.6 million b/d, representing a decrease of 0.1 million b/d from their last year level. And demand in Non-OECD countries decreased by 1.6% or 0.8 million b/d comparing with their previous month level to reach 49 million b/d, representing an increase of 1.6 million b/d from their last year level.
On the supply side, preliminary estimates show that world oil supplies for January 2016 increased by 0.4% or 0.4 million b/d comparing with the previous month level to reach 99.5 million b/d, a level that is 3.9 million b/d higher than last year.

In January 2016, OPEC crude oil and NGLs/condensates total supplies increased by 0.8% or 0.3 million b/d comparing with the previous month level to reach 39.8 million b/d, a level that is 1.9 million b/d higher than last year. In contrast preliminary estimates show that Non-OPEC supplies remained stable at the same previous month level of 59.6 million b/d, a level that is 1.8 million b/d higher than last year. Preliminary estimates of the supply and demand for January 2016 reveal a surplus of 4.8 million b/d, compared to a surplus of 2.4 million b/d in December 2015 and a surplus of 2.5 million b/d in January 2015, as shown in table (2) and figure (6):

### Table 2: World Supply and Demand (Million b/d)

<table>
<thead>
<tr>
<th></th>
<th>January 2016</th>
<th>December 2015</th>
<th>Change from December 2015</th>
<th>January 2015</th>
<th>Change from January 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD Demand</td>
<td>45.6</td>
<td>46.8</td>
<td>-1.2</td>
<td>45.7</td>
<td>-0.1</td>
</tr>
<tr>
<td>Rest of the World</td>
<td>49.0</td>
<td>49.8</td>
<td>-0.8</td>
<td>47.4</td>
<td>1.6</td>
</tr>
<tr>
<td>World Demand</td>
<td><strong>94.6</strong></td>
<td><strong>96.6</strong></td>
<td><strong>-2.0</strong></td>
<td><strong>93.1</strong></td>
<td><strong>1.5</strong></td>
</tr>
<tr>
<td>OPEC Supply:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crude Oil</td>
<td>33.0</td>
<td>32.7</td>
<td>0.3</td>
<td>31.2</td>
<td>1.8</td>
</tr>
<tr>
<td>NGL’s &amp; Cond.</td>
<td>6.8</td>
<td>6.8</td>
<td>0.0</td>
<td>6.7</td>
<td>0.1</td>
</tr>
<tr>
<td>Non-Opec Supply</td>
<td>57.3</td>
<td>57.2</td>
<td>0.1</td>
<td>55.5</td>
<td>1.8</td>
</tr>
<tr>
<td>Processing Gain</td>
<td>2.3</td>
<td>2.4</td>
<td>-0.1</td>
<td>2.3</td>
<td>0.0</td>
</tr>
<tr>
<td>World Supply</td>
<td><strong>99.5</strong></td>
<td><strong>99.1</strong></td>
<td><strong>0.4</strong></td>
<td><strong>95.6</strong></td>
<td><strong>3.9</strong></td>
</tr>
<tr>
<td>Balance</td>
<td>4.8</td>
<td>2.4</td>
<td></td>
<td>2.5</td>
<td></td>
</tr>
</tbody>
</table>

Source: Energy Intelligence Briefing February 5, 2016.
Tables (7) and (8) in the annex show world oil demand and supply for the period 2013-2015.

**US tight oil production**

In January 2016, US tight oil production decreased by 67 thousand b/d or 1.3% comparing with the previous month level to reach 5.090 million b/d, representing a decrease of 107 thousand b/d from their last year level. The US oil rig count decreased by 56 rig comparing with the previous month level to reach 419 rig, a level that is 719 rig lower than last year, as shown in table (3) and figure (7):

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

<table>
<thead>
<tr>
<th></th>
<th><strong>January 2016</strong></th>
<th><strong>December 2015</strong></th>
<th><strong>Change from December 2015</strong></th>
<th><strong>January 2015</strong></th>
<th><strong>Change from January 2015</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>tight oil production</strong></td>
<td><strong>-0.107</strong></td>
<td><strong>5.197</strong></td>
<td><strong>-0.067</strong></td>
<td><strong>5.157</strong></td>
<td><strong>5.090</strong></td>
</tr>
<tr>
<td><strong>Oil rig count (rig)</strong></td>
<td><strong>-719</strong></td>
<td><strong>1138</strong></td>
<td><strong>-56</strong></td>
<td><strong>475</strong></td>
<td><strong>419</strong></td>
</tr>
</tbody>
</table>

Source: EIA, Drilling Productivity Report for key tight oil and shale gas regions, February 2016.

* focusing on the seven most prolific areas, which are located in the Lower 48 states. These seven regions accounted for 95% of domestic oil production growth during 2011-2013 (Bakken, Eagle Ford, Haynesville, Marcellus, Niobrara, Permian, Utica)
3. Oil Trade

USA

In December 2015, US crude oil imports increased by 532 thousand b/d or 7.2% comparing with the previous month level to reach 7.9 million b/d, and US oil products imports increased by 200 thousand b/d or 12.2% to reach about 1.8 million b/d.

On the export side, US crude oil exports decreased by 2 thousand b/d or 0.4% comparing with the previous month level to reach about 473 thousand b/d, whereas US products exports increased by 75 thousand b/d or 1.9% to reach 4 million b/d. As a result, US net oil imports in December 2015 were 658 thousand b/d or nearly 14.3% higher than the previous month, averaging 5.3 million b/d.

Canada remained the main supplier of crude oil to the US with 43% of total US crude oil imports during the month, followed by Saudi Arabia with 15%, then Venezuela with 11%. OPEC Member Countries supplied 40% of total US crude oil imports.

Japan

In December 2015, Japan’s crude oil imports increased by 248 thousand b/d or 8% comparing with the previous month to reach 3.5 million b/d. And Japan oil products imports increased by 99 thousand b/d or 17% comparing with the previous month to reach 677 thousand b/d.

On the export side, Japan’s oil products exports decreased in December 2015, by 35 thousand b/d or 6% comparing with the previous month, averaging 528 thousand b/d. As a result, Japan’s net oil imports in December 2015 increased by 381 thousand b/d or 11.6% to reach 3.7 million b/d.

Saudi Arabia was the big supplier of crude oil to Japan with a share of 33% of total Japan crude oil imports, followed by UAE with 22% and Kuwait with 9% of total Japan crude oil imports.
China

In December 2015, China’s crude oil imports increased by 1.17 million b/d or 18% to reach 7.8 million b/d, and China’s oil products imports increased by 401 thousand b/d or 41% to reach 1.4 million b/d.

On the export side, China’s crude oil exports reached 59 thousand b/d, and China’s oil products exports increased by 31 thousand b/d or 3% to reach 1.2 million b/d. As a result, China’s net oil imports reached 8 million b/d, representing an increase of 24% comparing with the previous month.

Russia was the big supplier of crude oil to China with 15% of total China’s crude oil imports during the month, followed by Saudi Arabia with 14% and Angola with 10%.

Table (4) shows changes in crude and oil products net imports/(exports) in December 2015 versus the previous month:

<table>
<thead>
<tr>
<th></th>
<th>USA</th>
<th>Japan</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.125</td>
<td>0.133</td>
<td>0.370</td>
</tr>
<tr>
<td>Change from November 2015</td>
<td>-2.287</td>
<td>0.016</td>
<td>-0.149</td>
</tr>
<tr>
<td>Change from November 2015</td>
<td>-2.162</td>
<td>0.149</td>
<td>0.221</td>
</tr>
</tbody>
</table>

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


4. Oil Inventories

In December 2015, OECD commercial oil inventories increased by 8 million barrels to reach 3012 million barrels – a level that is 274 million barrels higher than a year ago. It is worth mentioning that during the month, commercial crude inventories in OECD increased by 15 million barrels to reach 1200 million barrels, whereas commercial oil products inventories decreased by 7 million barrels to reach 1812 million barrels.

Commercial oil inventories in Americas increased by 8 million barrels to reach 1602 million barrels, of which 646 million barrels of crude and 956 million barrels of oil products. Commercial oil Inventories in Europe increased by 2 million barrels to reach 984 million barrels, of which 356 million barrels of crude and 628 million barrels of oil products.
Commercial oil inventories in Pacific decreased by 2 million barrels to reach 426 million barrels, of which 198 million barrels of crude and 228 million barrels of oil products.

In the rest of the world, commercial oil inventories increased by 48 million barrels to reach 2817 million barrels, and the Inventories at sea increased by 44 million barrels to reach 1164 million barrels.

As a result, Total Commercial oil inventories in December 2015 increased by 56 million barrels comparing with the previous month to reach 5829 million barrels – a level that is 627 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 1853 million barrels – a level that is 7 million barrels higher than a year ago.

Total world inventories, at the end of December 2015 were at 8845 million barrels, representing an increase of 99 million barrels comparing with the previous month, and an increase of 753 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 December 2015.
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 January 2016 increased by $0.35/million BTU comparing with the previous month to reach $2.28/million BTU.

The comparison, shown in table (5), between natural gas prices and the WTI crude reveal differential of $3.1/million BTU in favor of WTI crude.

Table 5

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas (2)</td>
<td>3.0</td>
<td>2.9</td>
<td>2.8</td>
<td>2.6</td>
<td>2.9</td>
<td>2.8</td>
<td>2.8</td>
<td>2.8</td>
<td>2.7</td>
<td>2.3</td>
<td>2.1</td>
<td>1.9</td>
</tr>
<tr>
<td>WTI Crude (3)</td>
<td>8.2</td>
<td>8.8</td>
<td>8.2</td>
<td>9.4</td>
<td>10.2</td>
<td>10.3</td>
<td>8.8</td>
<td>7.4</td>
<td>7.8</td>
<td>8.0</td>
<td>7.4</td>
<td>6.4</td>
</tr>
</tbody>
</table>

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 December 2015, the price of Japanese LNG imports decreased by $0.4/million BTU comparing with the previous month to reach $8.5/million BTU, the price of Korean LNG imports decreased by $0.8/million BTU comparing with the previous month to reach $8.7/million BTU, and the price of Chinese LNG imports decreased by $0.3/million BTU comparing with the previous month to reach $7.6/million BTU.

2.2. LNG Imports

Total Japanese, Korean and Chinese LNG imports from various sources, increased by 21.2% or 2380 thousand tons from the previous month level to reach 13.598 million tons.

Table (6) shows the prices and quantities of LNG imported by Japan, South Korea, and China for the period 2014-2015.
### LNG Prices and Imports: Korea, Japan, and China 2013-2015

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Imports (thousand tons)</th>
<th>Average Import Price ($/million BTU)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Japan</td>
<td>Korea</td>
</tr>
<tr>
<td>2014</td>
<td>145798</td>
<td>19891</td>
</tr>
<tr>
<td>January 2014</td>
<td>15282</td>
<td>2652</td>
</tr>
<tr>
<td>February</td>
<td>13203</td>
<td>1498</td>
</tr>
<tr>
<td>March</td>
<td>13638</td>
<td>1479</td>
</tr>
<tr>
<td>April</td>
<td>11807</td>
<td>1375</td>
</tr>
<tr>
<td>May</td>
<td>10286</td>
<td>1579</td>
</tr>
<tr>
<td>June</td>
<td>10371</td>
<td>1343</td>
</tr>
<tr>
<td>July</td>
<td>11855</td>
<td>1835</td>
</tr>
<tr>
<td>August</td>
<td>11175</td>
<td>1582</td>
</tr>
<tr>
<td>September</td>
<td>10972</td>
<td>1394</td>
</tr>
<tr>
<td>October</td>
<td>11080</td>
<td>1381</td>
</tr>
<tr>
<td>November</td>
<td>11566</td>
<td>1757</td>
</tr>
<tr>
<td>December</td>
<td>14563</td>
<td>2016</td>
</tr>
<tr>
<td>2015</td>
<td>137597</td>
<td>19606</td>
</tr>
<tr>
<td>January 2015</td>
<td>14677</td>
<td>2121</td>
</tr>
<tr>
<td>February</td>
<td>12489</td>
<td>1661</td>
</tr>
<tr>
<td>March</td>
<td>12531</td>
<td>1346</td>
</tr>
<tr>
<td>April</td>
<td>10982</td>
<td>1545</td>
</tr>
<tr>
<td>May</td>
<td>9242</td>
<td>1123</td>
</tr>
<tr>
<td>June</td>
<td>10134</td>
<td>1724</td>
</tr>
<tr>
<td>July</td>
<td>11146</td>
<td>1922</td>
</tr>
<tr>
<td>August</td>
<td>10408</td>
<td>1348</td>
</tr>
<tr>
<td>September</td>
<td>10598</td>
<td>1295</td>
</tr>
<tr>
<td>October</td>
<td>10574</td>
<td>1602</td>
</tr>
<tr>
<td>November</td>
<td>11218</td>
<td>1818</td>
</tr>
<tr>
<td>December</td>
<td>13598</td>
<td>2101</td>
</tr>
</tbody>
</table>

Source: World Gas Intelligence various issues.
2.3. Sources of LNG imports

Qatar was the big supplier of LNG to Japan, Korea and China with 2.946 million tons or 21.7% of total Japan, Korea and China LNG imports in December 2015, followed by Australia with 21.6% and Malaysia with 17.3%. Whereas Algeria exported about 132 thousand tons of LNG to Korea and China.

The Arab countries LNG exports to Japan, Korea and China totaled 4.231 million tons - a share 31.1% of total Japanese, Korean and Chinese LNG Imports during the same month.

2.4. LNG Exporter Netbacks

With respect to the Netbacks at NE Asia markets, Russia ranked first with $6.48/million BTU at the end of December 2015, followed by Indonesia with $6.39/million BTU then Australia and Malaysia with $6.34/million BTU. And LNG Qatar’s netback reached $6.19/million BTU, and LNG Algeria’s netback reached $5.88/million BTU.

Table (7) shows LNG exporter main countries to Japan, South Korea, and China and their netbacks at the end of December 2015.

<table>
<thead>
<tr>
<th>LNG Exporter Main Countries To Japan, Korea and China, And Their Netbacks At The End Of December 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Imports (thousand tons)</strong></td>
</tr>
<tr>
<td>Japan</td>
</tr>
<tr>
<td>Total Imports, of which:</td>
</tr>
<tr>
<td>7944</td>
</tr>
<tr>
<td>Qatar</td>
</tr>
<tr>
<td>1310</td>
</tr>
<tr>
<td>6.19</td>
</tr>
<tr>
<td>Australia</td>
</tr>
<tr>
<td>1763</td>
</tr>
<tr>
<td>6.34</td>
</tr>
<tr>
<td>Malaysia</td>
</tr>
<tr>
<td>1527</td>
</tr>
<tr>
<td>6.34</td>
</tr>
<tr>
<td>Indonesia</td>
</tr>
<tr>
<td>775</td>
</tr>
<tr>
<td>6.39</td>
</tr>
<tr>
<td>Russia</td>
</tr>
<tr>
<td>661</td>
</tr>
<tr>
<td>6.48</td>
</tr>
<tr>
<td>Nigeria</td>
</tr>
<tr>
<td>305</td>
</tr>
<tr>
<td>5.87</td>
</tr>
<tr>
<td>Algeria</td>
</tr>
<tr>
<td>–</td>
</tr>
<tr>
<td>5.88</td>
</tr>
</tbody>
</table>

* Export Revenues minus transportation costs, and royalty fees.
Source: World Gas Intelligence various issues.
Tables Annex
Pursuant to its policy of encouraging scientific research by awarding two prizes on a biennial basis (First Prize KD 7000, Second Prize KD 5000, equivalent to USD $24000 and USD $17000), upon the resolution number 1/139 of OAPEC Executive Bureau at its meeting dated 12/10/2014. The Organization of Arab Petroleum Exporting Countries (OAPEC) is pleased to announce that the research topic selected for the “OAPEC Award for Scientific Research for the Year 2016” is:

“Re-Refining of Used Lubricating Oils and its Economic & Environmental Implications”

Research Theme

OAPEC members’ increasing interest in re-refining of used lubricating oils comes in line with their efforts to improving the performance of oil industry, seizing the added value opportunities, and maximizing the utilization of their natural resources, in addition to enhance their compliance with the requirements of the legislation related to environment protection.

The following main issues are suggested for the research, to which the researcher is encouraged to add other suitable aspects:
1- Historical overview of used lube oils re-refining processes. 
2- Sources and evaluation of used lube oils.
3- Types of used lube oils re-refining processes.
4- Environmental implications of re-refining of used lube oils.
5- Economic viability of the re-refining process and its role in improving the added value of oil industry and natural resources conservation.
6- Examples and case studies of used oils re-refining projects worldwide and in Arab countries.
7- Conclusions and recommendations.

Conditions for Submitting the Research

1- The research may be submitted by one or more author(s). Institutions and organizations are excluded.
2- The research submitted must be new and original, and has not been granted an award previously.
3- The author(s) shall agree in advance to give OAPEC the right to print and publish the research in case his/her/their win one of the prizes. A signed statement to this effect must be submitted with the research (sample provided below). The author(s) will maintain all other rights, including patent rights (if applicable). OAPEC shall not exercise its right to publish the winning research for a period of six months commencing with the date of advising the winning author(s) with the decision of the Award Committee.
Organization of Arab Petroleum Exporting Countries (OAPEC)

OAPEC AWARD FOR SCIENTIFIC RESEARCH FOR THE YEAR 2016

TOPIC

“Re-Refining of Used Lubricating Oils and its Economic and Environmental Implications”

Statement of relinquishment of printing and publication right for the research

I, undersigned:

Hereby undertake to relinquish all printing and publications right of the research submitted by me entitled:


to the Organization of the Arab Petroleum Exporting Countries (OAPEC), in the event of winning one of the two prizes of OAPEC Award for Scientific Research for the year 2016.

Name: ........................................
Signature: ....................................

Date:  /    /