OPEC bulletin

5/15

Hofburg again plays host to OPEC Seminar

6th OPEC International Seminar

Petroleum: An Engine for Global Development

3–4 June 2015

Hofburg Palace
Vienna, Austria

www.opecseminar.org

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OPEC International Seminar:

Advocating oil market dialogue

On June 3, 2015, Austria's famous Hofburg Palace will once again open its doors to OPEC's International Seminar. The stately building, which dates back to the 13th century, will host what promises to be two days of intense and lively discussion on the global oil sector. It is a striking and most fitting venue. As the former imperial residence of the Habsburg dynasty, rulers of the Austro-Hungarian Empire, the Hofburg has been home to some of the most powerful people in European and Austrian history. Today, part of the Palace forms the official residence and workplace of the President of Austria.

Throughout the annual calendar, the Hofburg also stages over 300 events — events, such as the OPEC Seminar. This will be the fourth time the Organization, which has had its Headquarters in the Austrian capital since 1965, has chosen to convene its International Seminar in the premises' palatial conference centre, taking advantage of its unique and congenial atmosphere. Indeed, a prestige setting for an important event.

Of course, it is easy to draw parallels between the two. Both the Palace and OPEC are steeped in history, with many eventful years behind them — and surely many more to come. They are also both important institutions in Austria and in their own particular ways contribute greatly to the international standing of the country, whose capital is regularly ranked as the top city in the world for 'livability'.

Customarily, the OPEC International Seminar offers decision-makers, experts and analysts the opportunity to pinpoint and examine the challenges facing the oil industry now and in the years ahead. High-ranking delegates typically include OPEC and non-OPEC oil and energy ministers, heads of major oil companies, international organizations and energy institutions, captains of industry, as well as renowned academics and, of course, the international media.

And after what has been a difficult 12 months for the majority of stakeholders associated with the international oil market, there will be a great deal for the Seminar's 700 or so participants to discuss and digest.

Over the two days, participants will hear from some 30 prominent speakers, who will cover all aspects of the global petroleum sector and related issues. The Seminar has been divided into five sessions which will cover a range of topical subjects that will include global energy outlooks, oil market stability, production capacity and investment, technology and the environment, and prospects for the world economy.

Clearly, with so much uncertainty surrounding the international oil market today, high-level international energy fora such as the OPEC Seminar are essential for addressing the main issues and helping overcome the many challenges that exist. Striving for oil market equilibrium and limiting harmful price volatility have been central to OPEC's cause since the Organization's formation in 1960. And this overriding commitment to stability is why the Organization and its Member Countries have made repeated calls for cooperation among the principle energy industry stakeholders. OPEC remains convinced that only through established and regular dialogue can a better understanding of the market's complex inner workings be reached and the requirements of its principle players identified.

There is tentative optimism right now that the global economy, which drives petroleum demand, is moving in the right direction, albeit slowly. The situation is still fragile so it is important that this marginal improvement is carefully nurtured. And since everyone benefits from a strong economy, then it follows suit that everyone has a part to play in its well-being, including those attached to the petroleum sector.

The OPEC International Seminar is just one of the various vehicles by which the oil sector's main stakeholders can congregate to discuss the market and determine the best way forward for the future. Another significant undertaking, which has made great strides over the years, is the International Energy Forum (IEF), which brings producers and consumers together. Under such umbrella initiatives and in openly discussing the industry's most important issues, the various parties involved — the producers, the consumers, the oil companies and the investors — are not only able to narrow their differences, but importantly strive to pull together … in the same direction.

It might be a big ask of some stakeholders who have grown used to going it alone — but such action would surely make all the difference to oil's future welfare.

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Cover
This month's cover shows the historical Hofburg Palace in Vienna, Austria, host to the 6th OPEC International Seminar (see Feature on page 6). Image courtesy Shutterstock.

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OPEC Membership and aims
OPEC is a permanent, intergovernmental Organization, established in Baghdad, on September 10–14, 1960, by IR Iran, Iraq, Kuwait, Saudi Arabia and Venezuela. Its objective — to coordinate and unify petroleum policies among its Member Countries, in order to secure a steady income to the producing countries; an efficient, economic and regular supply of petroleum to consuming nations; and a fair return on capital to those investing in the petroleum industry. Today, the Organization comprises 12 Members: Qatar joined in 1961; Libya (1962); United Arab Emirates (Abu Dhabi, 1967); Algeria (1969); Nigeria (1971); Angola (2007). Ecuador joined OPEC in 1973, suspended its Membership in 1992, and rejoined in 2007. Gabon joined in 1975 and left in 1995. Indonesia joined in 1962 and suspended its Membership on December 31, 2008.

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Contributions
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Editorial policy
The *OPEC Bulletin* is published by the OPEC Secretariat (Public Relations and Information Department). The contents do not necessarily reflect the official views of OPEC nor its Member Countries. Names and boundaries on any maps should not be regarded as authoritative. The OPEC Secretariat shall not be held liable for any losses or damages as a result of reliance on and/or use of the information contained in the *OPEC Bulletin*. Editorial material may be freely reproduced (unless copyrighted), crediting the *OPEC Bulletin* as the source. A copy to the Editor would be appreciated.

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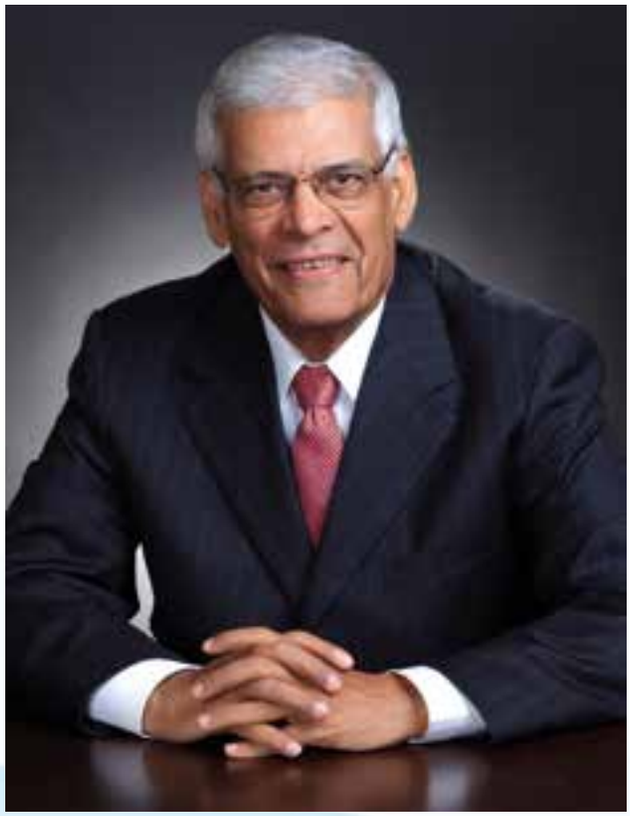
Clear projection of demand essential for global oil producers

— El-Badri



Abdalla Salem El-Badri, OPEC Secretary General.

A clear projection of energy demand is vital if producers are to meet the future needs of the consumers, particularly in view of the fact that expensive investment is required to sustain energy supplies, according to Abdalla Salem El-Badri, OPEC Secretary General.

In an article for the publication produced for the 41st G7 Summit, to be held in Germany in early June, he points out that the world today is a very different place to the one when representatives of a small group of developing countries sat down together in Baghdad to form OPEC back in 1960.

At that time, he says, the world had not yet witnessed the first human spaceflight, air travel was still in its infancy, the Beatles had only just formed, and the use of personal computers and mobile phones was still decades away.

"The intervening years have seen much change. This is certainly true for the character and dynamics of the energy sector, with new technologies pushing the frontiers of the industry, more choice and availability of energies, an expansion in global travel and trade, the increased financialization of energy markets, and an evermore interdependent energy world," he observes.

However, says El-Badri, one basic issue has remained central to the industry and to producers and consumers alike — the importance of energy security.

Energy security

"Discussing the topic of energy security might elicit a variety of responses, but, in general, several key characteristics remain constant. Although this is not an exhaustive list, the basic tenets of energy security have been, and remain as follows:

- "It is reciprocal. Security of demand is as important to producers as security of supply is to consumers.
- It should cover all foreseeable time horizons. Security tomorrow is as important as security today.
- It should be universal, applying to rich and poor countries alike, with the focus on the three pillars of sustainable development and, in particular, the eradication of energy poverty and the provision of modern energy services.
- It should benefit from enhanced dialogue and cooperation among stakeholders."

> *"... security of supply and security of demand cannot be decoupled ... a comprehensive look at energy security is needed over the short-, medium- and long-term timeframes."*

El-Badri notes in the article that OPEC recognizes the importance of security of supply to consumers and this can be viewed in its actions over the years. The Organization, he claims, has kept the market well supplied — and continues to do so.

It holds sufficient spare capacity that can be used to bring balance to the market if there is a supply shortfall, due to issues such as geopolitical or weather-related events. Alongside oil stocks, spare capacity gives vital flexibility to the market during unforeseen events.

"However, it is also essential to underscore the issue of security of demand for oil producers. It is vital to have the clearest possible picture in relation to future oil demand, particularly in an industry subject to long lead times and payback periods."

Policies

At OPEC, says El-Badri, "we appreciate the importance of energy-efficiency measures and every country has the right to initiate its own energy and environmental policies. Nevertheless, it is crucial to appreciate that some policies offer uncertainties in regard to their impact on future oil consumption levels and overall energy demand."

To sum this up simply, he says, producers do not want to waste precious financial resources on infrastructure that might not be needed. At the same time, however, if timely and adequate investments are not made, future consumer needs might not be met.

The OPEC Secretary General says that the importance of this is further underscored when it comes to assessing oil-related investments. *OPEC's World Oil Outlook 2014* estimates that oil-related investment requirements will approach $10 trillion (in 2013 dollars) between 2014 and 2040.

"It all underlines the fact that security of supply and security of demand cannot be decoupled and that a comprehensive look at energy security is needed over the short-, medium- and long-term timeframes," he maintains.

El-Badri points out that OPEC also recognizes the importance of understanding that energy security means different things to different people, particularly the 1.3 billion people without access to electricity and the 2.7bn people relying on biomass for their basic needs.

"It is extremely positive that the proposed seventh goal of the *United Nations Sustainable Development Goals* will call for countries to "ensure access to affordable, reliable, sustainable and modern energy for all.

"Sustainable development goals are a high priority for OPEC Members. Sustainable development is the main aim of the financial and technical assistance they provide to other developing countries, whether directly through their own aid institutions or through their participation in the OPEC Fund for International Development (OFID). OFID supports the UN's Sustainable Energy for All (SE4All) initiative, as well as many projects aimed at alleviating energy poverty, addressing it holistically alongside food and water security."

El-Badri observes that there are also several other challenges and uncertainties that feed into the issue of future energy security. These include the ongoing UN climate change negotiations and the importance of reaching an agreement that is comprehensive, balanced, fair and equitable for all.

There is also the role and impact of financial market speculation on the oil market, human resource requirements and potential staffing shortages, as well as the need to continually improve data transparency.

"To help meet these and other challenges, OPEC believes it is important to constantly explore ways to develop and expand its dialogue and cooperation with other stakeholders."

El-Badri stresses that a prime example of this is OPEC's proactive participation in the International Energy Forum (IEF), which plays an important role in strengthening energy cooperation and dialogue between producers and consumers.

OPEC's involvement includes being a partner organization in the Joint Organizations Data Initiative (JODI), which focuses on enhancing the transparency, quality, timeliness and flows of oil and gas market data.

In addition, notes El-Badri, OPEC regularly participates in other dialogue processes, such as those with the IEF and the International Energy Agency. OPEC has been closely involved in several of the G20's energy-related work streams and plays an active role in the European Union-OPEC Energy Dialogue and the Russia-OPEC Energy Dialogue.

"Such dialogue and cooperation are essential elements in the ongoing efforts to maintain stability and confidence in the industry and help everyone meet their energy security needs.

"The world may have changed a great deal since OPEC was formed back in 1960, but the goal of everyone to achieve energy security remains, whether they are an individual, business, country or region," he states in the article.

El-Badri professes that OPEC Members continue to play a positive role in this regard, as they have done since the Organization was formed back in 1960: through holding regular and stable supplies of oil, maintaining an adequate level of spare capacity, supporting efforts to alleviate energy poverty, and engaging and cooperating with other industry stakeholders.

"The world may have changed a great deal since OPEC was formed back in 1960, but the goal of everyone to achieve energy security remains, whether they are an individual, business, country or region."

6th OPEC International Seminar

Petroleum's future under the microscope

Vienna's Hofburg again sets stage for OPEC International Seminar

The historic Hofburg Palace in the Austrian capital, Vienna, will again be the setting for OPEC's International Seminar in June.

And after a year of topsy-turvy developments in the international oil market, against a backdrop of geopolitical upheaval, there will be a great deal for high-ranking delegates at the premier OPEC event to discuss.

One of the topics that will surely be the centre of considerable attention will be the recent fall in international crude oil prices and how it has affected the energy industry in general.

Since the summer months of 2014, international crude oil prices have fallen by up to 60 per cent, a development caused mainly by oversupply, but exacerbated by market speculation.

Pressure on the oil market has been accompanied by a good deal of uncertainty caused by geopolitical developments in various parts of the world.

Profound effect

The sudden drop in prices has had a profound effect on the oil industry and its stakeholders, especially the producers, the oil companies, the oil service firms and the investors. Reports show that some 100,000 jobs in the industry have already been lost as a result of companies' speedy retrenchment in response to the price slump.

The current state of the global economy, the prognosis for the future and how the situation will likely affect energy demand, will also come under close scrutiny.

A cross-section of the oil sector's main parties will be in attendance at the Seminar, an occasion they will surely use to comment on the general situation and to share their own particular experiences. Of special interest to delegates will be their views on what they think the future holds for the petroleum industry.

The famous Austrian Palace is a perfect setting for the Seminar. The former imperial residence of the Habsburg dynasty, rulers of the Austro-Hungarian Empire, this splendid building has been home to some of the most powerful people in European and Austrian history. Today,

The historic Hofburg Palace, which will be hosting the OPEC International Seminar for the fourth time.

Roll out the red carpet … the grand stairway to the Hofburg's conference centre.

it is a prestigious venue for over 300 events in the annual calendar.

On June 3–4, it will for the fourth time open the doors of its grandiose conference centre to some of the energy industry's most influential figures and personalities, including OPEC Oil and Energy Ministers.

The 6th International Seminar, which will follow the very successful 3rd and 4th and 5th editions of the high-level OPEC gathering that were held at the Hofburg in 2006, 2009 and 2012, respectively, will have as its theme: *'Petroleum: fuelling prosperity, supporting sustainability'*.

Also in attendance and making presentations at this year's event will be numerous non-OPEC oil and energy ministers, heads of major oil companies, international organizations and energy institutions, captains of industry, as well as renowned academics and analysts.

The OPEC Seminar is today recognized as one of the most significant industry gatherings on the global energy calendar. This is primarily due to the calibre of participants and the high level of discussion that takes place on all the leading issues affecting the global energy sector.

The international media find the event an invaluable source of information on today's petroleum industry developments and current modes of thinking.

And with so many challenging developments taking place in the global energy sector right now, discussions over what promises to be a very busy two days are likely to be intense.

Strategic players

Bringing together strategic players that have a bearing on the present and future direction of the international petroleum industry, the Seminar has not only developed a wide outreach across the energy sector, but also encompasses important related areas, such as the global economy, international finance, sustainable development, technological processes, energy poverty and the environment.

But there will be no respite when the Seminar's deliberations draw to a close as the following day the Organization's Oil and Energy Ministers will move to their Headquarters, also in the Austrian capital, for the 167th Ordinary Meeting of the OPEC Ministerial Conference.

It will be at those talks that the OPEC Heads of Delegation will decide on whether or not to leave their current oil production ceiling of 30 million barrels/day in

force for the second half of the year. This will depend on their overall assessment of the international oil market, including the performance of the global economy and especially the fundamentals of supply and demand.

All in all, with the Seminar and the Conference, it will prove to be a busy time for the Organization and its Members.

Seminar's five sessions

The 6th OPEC International Seminar will comprise five sessions.

Session 1 on 'Global energy outlooks' will look at present and recent trends and energy outlooks; analyze the challenges and opportunities facing the energy industry; and review key global and regional energy developments.

The Session will be chaired by Ali I Naimi, Saudi Arabia's Minister of Petroleum and Mineral Resources. Speakers will include Abdalla Salem El-Badri, OPEC Secretary General; Maria van de Hoeven, Executive Director of the International Energy Agency (IEA); Rex Tillerson, Chairman and Chief Executive Officer of ExxonMobil; and Bob Dudley, Group Chief Executive Officer of BP.

Session 2 on 'Oil market stability' will see participants discuss the importance of cooperation in stabilizing the world oil market; debate the role of interaction between the physical and financial markets; and address the strengthening of consumer-producer dialogue.

Eng Bijan Namdar Zangeneh, the Islamic Republic of Iran's Minister of Petroleum, will chair the Session, while Adil Abd Al-Mahdi, Iraq's Minister of Oil, will make the keynote address. Other speakers scheduled to appear include Asdrubal Chavez J, Venezuela's Minister of Popular Power of Petroleum and Mining; Dharmendra Pradhan, India's Minister of Petroleum and Natural Gas; Dr Aldo Flores-Quiroga, Secretary General of the International Energy Forum (IEF); and Dr Urban Rusnak, Secretary General of the Energy Charter Secretariat.

Session 3 on 'Production capacity and investment' has as its objectives assessing how capacity expansion and investments are managed; discussing trends in demand as a determinant of oil upstream investment; and reviewing prospects for enhancing collaboration between national and international oil companies.

Due to be chaired by Eng Jose Maria Botelho de Vasconcelos, Angola's Minister of Petroleum, speakers

Session I: Global Energy Outlooks

Objectives:

- *Present the recent trends and energy outlooks*
- *Analyze the challenges and opportunities facing the energy industry*
- *Review key global and regional energy developments*

Chairperson:
Ali I Naimi
Minister of Petroleum & Mineral Resources,
Saudi Arabia

Speakers:
Abdalla Salem El-Badri
Secretary General, OPEC

Maria van der Hoeven
Executive Director, IEA

Rex Tillerson
Chairman & CEO, ExxonMobil

Bob Dudley
Group Chief Executive, BP

Programme details as of May 26, 2015 (subject to change).

An aerial view of participants attending the 5th OPEC International Seminar, held at the Hofburg in June 2012.

Session II: Oil Market Stability

Objectives:

- *Discuss the importance of co-operation in stabilizing the world oil market*
- *Debate on the role of interaction between physical and financial markets*
- *Address the strengthening of consumer-producer dialogue*

Chairperson:
Bijan Namdar Zangeneh
Minister of Petroleum, IR Iran

Keynote Speaker:
Adil Abd Al-Mahdi
Minister of Oil, Iraq

Speakers:

Asdrúbal Chávez J
Minister of Popular Power of Petroleum and Mining, Venezuela

Dharmendra Pradhan
Minister of Petroleum and Natural Gas, India

Dr Aldo Flores-Quiroga
Secretary General, IEF

Dr Urban Rusnák
Secretary General, Energy Charter Secretariat

Programme details as of May 26, 2015 (subject to change).

Delegates listen intently to presentations during the 5th OPEC International Seminar.

will comprise Abdouhrman Ataher Al-Ahirish, Vice Prime Minister for Corporations and Responsible for Oil, Libya; Alexander V Novak, the Russian Federation's Minister of Energy; Fu Chengyu, Chairman of Sinopec; Claudio Descalzi, Chief Executive Officer of Eni; John S Watson, Chairman and Chief Executive Officer of Chevron; and Patrick Pouyanne, Chief Executive Officer of Total.

Moving on to the second day of the Seminar, in Session 4, entitled 'Technology and the environment', delegates will give an overview of technology advancements supporting the oil industry; elaborate upon the role of multilateralism and developments in addressing climate change; and evaluate emerging technologies in the transportation sector.

Suhail Mohamed Al Mazrouei, United Arab Emirates Minister of Energy, will chair the Session, while the keynote address will be given by Eng Pedro Merizalde-Pavon, Ecuador's Minister of Hydrocarbons. Other speakers will include Dr Ali Saleh Al-Omair, Minister of Oil, Kuwait, the Nigerian Minister of Petroleum Resources *(name to be announced);* Ryan Lance, Chairman and Chief Executive Officer of ConocoPhillips; Ben van Beurden, Chief Executive Officer of Royal Dutch Shell; and Markus Mitteregger, Chief Executive Officer of Rohoel-Aufsuchungs Aktiengesellschaft.

Panel discussion

Session five will be a panel discussion on 'Prospects for the world economy'. It will identify the challenges to the world economy and its impact on the oil market; analyze the evolving paradigm in reconciling economic growth

Official badges will be prepared for all participants of the OPEC Seminar.

Session III: Production Capacity and Investment

Objectives:

- *Assess how capacity expansion and investments are managed*
- *Discuss trends in demand as a determinant of oil upstream investment*
- *Review prospects for enhancing collaboration between NOCs and IOCs*

Chairperson:

José Maria Botelho de Vasconcelos
Minister of Petroleum, Angola

Speakers:

Abdouhrman Ataher Al-Ahirish
Vice Prime Minister for Corporations and Responsible for Oil, Libya

Alexander V Novak
Minister of Energy, Russian Federation

Fu Chengyu
Former Chairman, Sinopec

Claudio Descalzi
CEO, Eni

John S Watson
Chairman of the Board & CEO, Chevron Corporation

Patrick Pouyanné
CEO, Total

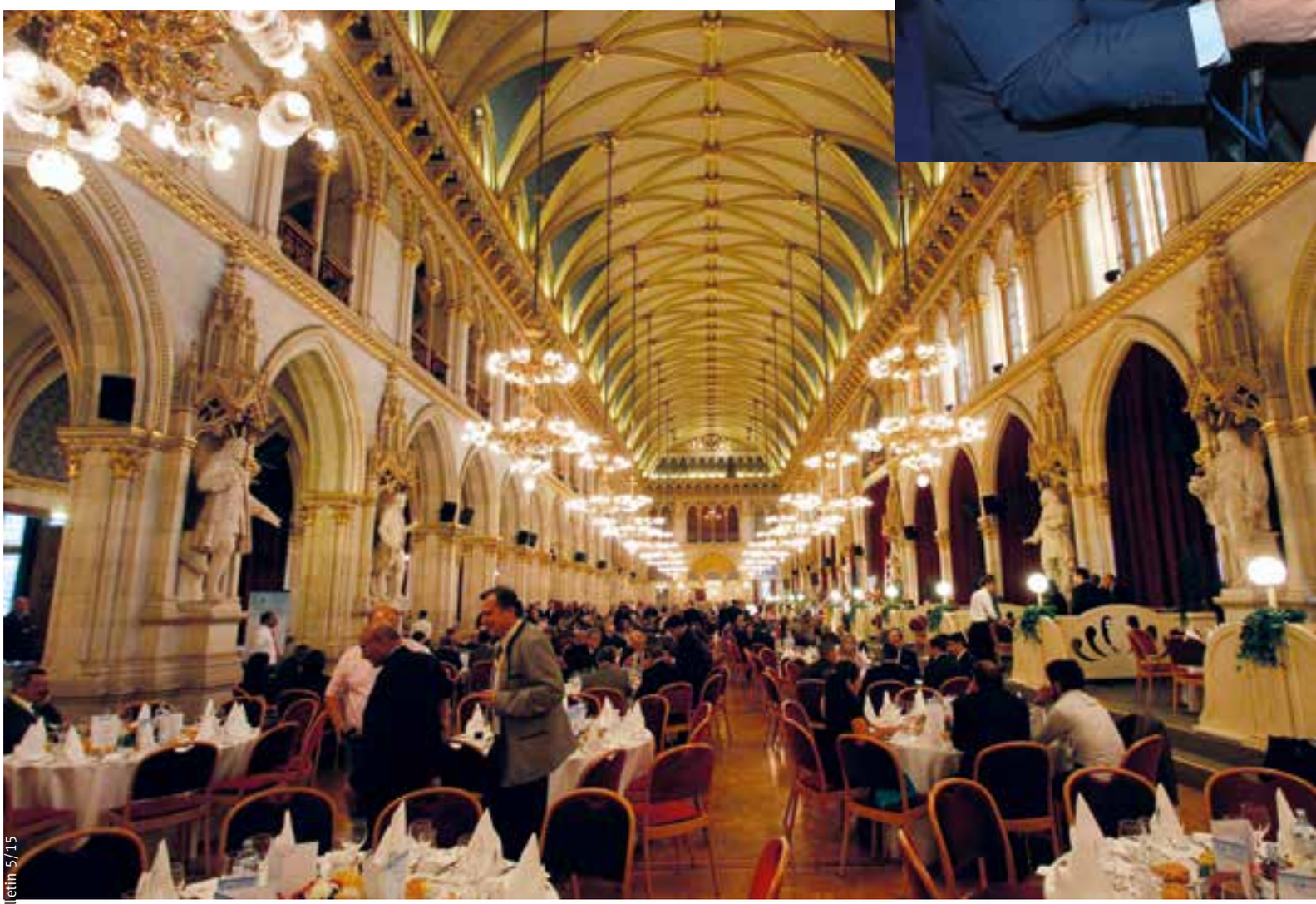
Programme details as of May 26, 2015 (subject to change).

and regulations; and review world efforts on energy poverty eradication.

Chaired by Dr Mohammed bin Saleh Al-Sada, Qatar's Minister of Energy and Industry, the Session's panelists will include Suleiman Jasir Al-Herbish, Director General of the OPEC Fund for International Development (OFID); Dr Seyed Mohammad Hossein Adeli, Secretary General of the Gas Exporting Countries Forum (GECF) ; Dr Thomas Helbling, Chief of the World Economic Studies Division at the International Monetary Fund (IMF); and Dr Paulo de Sa Practice, Manager of Energy and Extractives Global Practice at the World Bank.

Gala dinner at City Hall

At the end of the first day of deliberations, a Gala Dinner will be held for delegates at Vienna City Hall. This will



The CNN's John Defterios (l) seen here with Abdalla Salem El-Badri (r), OPEC Secretary General, at the 5th International OPEC Seminar, will again be one of the moderators at the 6th Seminar.

also feature the presentation of OPEC Awards, one dedicated to honouring excellence in Research and the other in Journalism *(see page 18)*.

Also on the first day of the Seminar, 40 fortunate participants will get the opportunity to visit Rohöl-Aufsuchungs Aktiengesellschaft (RAG), Austria's oldest oil and gas company. This follows an invitation from the firm's Chief Executive Officer, Markus Mitteregger.

The trip will entail a site visit to the company's historic oil production installations in Zistersdorf, Austria, which is close to Vienna.

During the tour, visitors will see how the firm has managed to enable oil and the environment to 'live' together.

The Seminar's Gala Dinner will again be held at Vienna City Hall.

Session IV: Technology and the Environment

Objectives:

- *Present an overview of technology advancements supporting the oil industry*
- *Elaborate upon the role of multilateralism and developments in addressing climate change*
- *Evaluate emerging technologies in the transportation sector*

Chairperson:
Suhail Mohamed Al Mazrouei
Minister of Energy, UAE

Keynote Speaker:
Pedro Merizalde-Pavón
Minister of Non Renewable Natural Resources, Ecuador

Speakers:
Dr Ali Saleh Al-Omair
Minister of Oil, Kuwait

Minister of Petroleum Resources,
Nigeria*

Ryan Lance
Chairman & CEO, ConocoPhillips

Ben van Beurden
CEO, Royal Dutch Shell plc

Markus Mitteregger
CEO, RAG (Rohöl-Aufsuchungs-Aktiengesellschaft)

** To be confirmed.*
Programme details as of May 26, 2015 (subject to change).

OPEC Seminar: a premier event

The OPEC International Seminar is today regarded as one of the premier events on the world energy calendar.

The high-profile gatherings have taken various forms over the years, but have always had a wide reach across the energy sector and beyond.

The latest in the series of Seminars, which began in 2001, will provide fresh impetus to key petroleum industry issues, helping to enhance existing and new avenues of dialogue and cooperation.

Insightful presentations and panel discussions have sought to move the energy debate forward, with high-calibre speakers discussing a wide range of topical issues affecting the industry, both in the short and long term, against a backdrop of uncertainty and instability.

The Seminars have increased in size and scope over the years, embracing, as time has passed, such related areas as global finance, sustainable development and the environment.

And their reputation has grown steadily. While an early seminar in 1978 was attended by some 200 participants, there was nearly four times that number over three decades later in 2012.

The very first OPEC Seminar, although not part of the present series, was held in Vienna on June 30–July 5, 1969, with the topical theme of *'International oil and the energy policies of the producing and consuming countries'*.

There was then a gap of more than eight years before the next Seminar, which turned out to be the first in a mini-series, listed as follows:

The Hofburg offers a unique ambience for events such as the OPEC International Seminar.

October 1977	'The present and the future role of the national oil companies'
October 1978	'Downstream operations in OPEC Member Countries: prospects and problems'
October 1979	'OPEC and future energy markets'
November 1981	'Energy and development; options for global strategies'

Another decade passed before there was a one-off 'Seminar on the environment' in April 1992, to help acquaint OPEC Member Countries with key environmental issues in the build-up to the Earth Summit in Rio de Janeiro in June of that year.

The new and current series of the 'OPEC International Seminar' began one year into the New Millennium. It comprises:

September 2001	The 1st OPEC Seminar (as it was then called), 'OPEC and the global energy balance: towards a sustainable energy future'
September 2004	The 2nd OPEC International Seminar, 'Petroleum in an interdependent world'
September 2006	The 3rd OPEC International Seminar, 'OPEC in a new energy era: challenges and opportunities'
March 2009	The 4th OPEC International Seminar, 'Petroleum: future stability and sustainability'
June 2012	The 5th OPEC International Seminar, 'Petroleum: fuelling prosperity, supporting sustainability'

The 6th OPEC International Seminar aims to build on the success of the previous events from the past decade. It will underpin OPEC's longstanding commitment to strive for a secure and stable international oil market by promoting cooperation and dialogue with stakeholders around the world.

Topics will include the global energy outlook, oil market stability, production capacity and investment, technology and the environment, and prospects for the world economy.

As in past Seminars, OPEC will again honour distinguished scholars who have made outstanding contributions to the petroleum industry and related areas during their lifetimes with its *2015 OPEC Award for Research* and *OPEC Award for Journalism*.

Session V: Panel Discussion — Prospects for the World Economy

Objectives:

- *Identify the challenges to the world economy and its impact on the oil market*
- *Analyze the evolving paradigm in reconciling economic growth and regulations*
- *Review world efforts on energy poverty eradication*

Chairperson:

Mohammed Bin Saleh Al-Sada
Minister of Energy & Industry, Qatar

Panelists:

Suleiman J Al-Herbish
Director General, OFID*

Dr Seyed Mohammad Hossein Adeli
Secretary General, GECF

Dr Thomas Helbling
Chief of the World Economic Studies Division, IMF

Dr Paulo de Sa
Practice Manager of the Energy and Extractives Global Practice, World Bank

Tentative programme of the 6th OPEC International Seminar

* *To be confirmed.*
Programme details as of May 26, 2015 (subject to change).

OPEC Research and Journalism Awards

As is customary at the OPEC International Seminar, the Organization will be handing out its two industry awards, the one for Research and the other for Journalism.

The competitions honour distinguished individuals who have made outstanding contributions to the petroleum industry and oil-related issues, particularly in enhancing cooperation between oil producers and consumers.

The OPEC news team at Bloomberg's, which won the OPEC Award for Journalism in 2012.

The OPEC Award for Research is given to researchers who have shown dedication to research and analysis of important oil related issues, contributed to improving the understanding of the key determinants that support oil market stability, and have exhibited a consistently critical, yet impartial, view on oil-related issues in public debates and discourse.

The successful candidate will also have demonstrated a high level of objectivity, integrity and innovative thinking throughout his/her career and furthered knowledge in the oil industry by encouraging and promoting young researchers within OPEC Member Countries and the developing world.

The winner of the OPEC Award for Research will receive a commemorative plaque and €27,000 in prize money.

The OPEC Award for Journalism, which is open to both print and broadcast journalists, is given to an experienced journalist or media organization that has delivered objective and balanced reporting/analysis of the oil market and related issues for more than ten years.

The Journalism Award also consists of a plaque and a certificate. In addition, OPEC will make a donation of €6,000 on behalf of the winner to an institution or charity of his/her choice.

Both Awards will be presented by the President of the OPEC Conference at a special Gala Dinner to be held at Vienna's City Hall at the end of the first day of the Seminar on June 3.

The selection process for the Awards is entrusted to two panels of experts, whose knowledge and experience enable them to make an insightful judgment on the achievements of potential winners in both fields.

OPEC established the two Awards to acknowledge and celebrate the past efforts of researchers and journalists working in the oil industry, and to encourage future research endeavours and objective reporting.

The OPEC Award for Research was first made in 2004 at the 2nd OPEC International Seminar, which was held in Vienna, in the September of that year.

It went to Professor Robert Mabro, Emeritus Fellow of St Anthony's College, Oxford University, and a Fellow of St Catherine's College, Oxford.

Mabro, a former Director of the Oxford Institute for Energy Studies, became Honorary President of the Institute in 2006.

The second OPEC Award for Research, made at the 3rd OPEC International Seminar in Vienna, in September 2006, was given to economist, Professor Peter Odell, then Professor Emeritus of International Energy Studies at Erasmus University, Rotterdam.

Odell, who was described at the presentation ceremony as a "gift to academia" and a legend in the global

Professor Oystein Noreng, of the BI Norwegian Business School, was the recipient of the last OPEC Award for Research.

energy sector, has devoted his whole life to research in petroleum economics.

The third winner of the OPEC Award for Research and honoured at the 4th OPEC International Seminar, in Vienna, in March 2009, was Professor Paul Stevens, Emeritus Professor at the Centre for Energy, Petroleum and Mineral Law and Policy of the University of Dundee.

Stevens has also enjoyed a long and illustrious career in the oil industry.

Professor Oystein Noreng, of the BI Norwegian Business School, was the recipient of the last OPEC Award for Research. It was presented to him at the 5th OPEC Seminar, held in the Austrian capital in June 2012, in recognition of his life-long academic work in the field of energy economics and petroleum.

The inaugural OPEC Award for Journalism was made at the 4th OPEC Seminar in 2009. It went to respected journalist, eminent scholar and academic, Dr Walid Khadduri, a former Executive Editor and Editor-in-Chief of the Middle East Economic Survey (MEES), who, at the time, was Economics Editor of the London-based Dar Al-Hayat news service.

At the 5th OPEC Seminar in 2012, the OPEC Journalism Award was handed to Bloomberg's OPEC news team.

Students to gain knowledge at OPEC Seminar

OPEC has extended an invitation to its Member Countries and host country, Austria, to nominate qualified students to attend the 6th OPEC International Seminar.

The goal is to help interested students learn more about the oil industry and expose them to the issues and challenges facing the global energy markets.

The importance of students and young people for the future of the oil and gas industry has long been recognized by OPEC. That is why the Organization has continually sought to support educational and training opportunities, and increase the engagement of students.

Some of the students that attended the 5th OPEC International Seminar.

Students selected for participation will enjoy a three-day stay in Vienna and attend all Seminar sessions at the Hofburg Palace.

They will have the chance to listen to high-level speakers and attend sessions with officials from across the energy industry. In addition, students will be given a briefing about OPEC, participate in a tour of the Organization's Secretariat and have an exclusive photo session with OPEC Secretary General, Abdalla Salem El-Badri.

By supporting student participation at the Seminar, OPEC seeks to raise awareness and increase understanding of its objectives among young people in both its Member Countries and in Austria.

It further hopes to increase knowledge of the energy industry among young people — and, in the long-term, expand their professional opportunities.

Thirty-nine countries, 600 foreign firms attend annual show ...

Iranian Oil and Gas Exhibition goes from strength to strength

Guests and delegates listen to presentations made during the opening ceremony of the Exhibition.

By Jerry Haylins

The Islamic Republic of Iran is on the cusp of a new era of cooperation and opportunity that promises to reinstate the OPEC Member Country's former standing as one of the world's top petroleum producers and exporters.

Everything in the capital city of Tehran appears to be going along smoothly and in disciplined fashion; however, with sanctions having affected some aspects of the nation's economic life, there are now expectations on the part of the public that more prosperous conditions are just around the corner.

Because of the sanctions, introduced in response to Iran's peaceful nuclear activities, major international oil and gas companies have been prevented from making

Eng Bijan Namdar Zangeneh, Iran's Minister of Petroleum.

Es'haq Jahangiri, Vice President of Iran.

deals with the country. These firms are vital for supplying the latest technology and expertise Iran requires for expanding its oil sector.

However, things are about to change. Ongoing discussions between Iran, one of the Founding Members of OPEC, and the so-called P5+1 group of industrialized countries over the nuclear issue could see a firm understanding and a concrete agreement reached by July, under which the sanctions would be lifted.

Since the breakthrough of a tentative accord was made earlier this year, the streets of the Iranian capital, Tehran, have been a buzz of activity, with both traders and shoppers excited about the possibility of new horizons being established for the country.

Eng Bijan Namdar Zangeneh (l), Iran's Petroleum Minister, with Dr Akbar Nematollahi, General Director of PR at the Iranian Ministry of Petroleum.

Eng Hamid Reza Araghi, Deputy Petroleum Minister and Managing Director of the National Iranian Gas Company, answering questions at his press conference.

This euphoria augments particularly well with the Iranian Petroleum Ministry, which is aiming to substantially boost the country's production of oil and gas, as well as petrochemicals.

The excitement surrounding Iran's future fortunes was in full evidence at the 20th International Oil, Gas, Refining and Petrochemical Exhibition, which was held on Tehran's massive International Permanent Fairground over four busy days from May 6.

Not only did the event — which is getting bigger and better with each passing year — prove to be a resounding success, it also showed that literally hundreds of foreign businesses are waiting in the wings to strike deals with Iran as soon as the domestic climate changes.

"The Exhibition indicates the interest that international companies have in being part of the Iranian oil, gas and refining arena," Iran's Vice President, Es'haq Jahangiri, said at the Exhibition's opening session.

He told assembled dignitaries and participants that the latest event has "opened a new window" of opportunity for the country's economic growth.

New interaction

"By using our national capacity, we are reaching a tremendous and significant level with our suitable and appropriate markets based on oil, gas and other industries and commodities related to petroleum. This also opens the window to new interaction," stated Jahangiri.

He felt confident Iran would reach an agreement with the P5+1 countries that would result in all the sanctions being lifted.

"This important development," he continued, "would lead to Iran's cooperation with international oil companies being more widespread." That could only spell good news in guaranteeing future oil supplies to all countries of the world.

Jahangiri pointed out that, under the sanctions regime, the successive Iranian governments had adopted suitable policies based on knowledge that had been able to achieve tremendous success in a relatively short period of time.

"The most important aspect of this has been the creation of stability and tranquility inside the country," he stressed.

Jahangiri said he had tremendous hope for the future of the country. Inflation had been reduced. Economic

growth had increased. And this was coupled with a rise in non-oil exports that had effectively boosted the nation's financial resources.

"Despite the imposition of the sanctions, one can trace this success over the various fiscal years and within the financial and banking systems of the country, as well as the allocations from the National Development Fund to the various economic sectors," he stated.

"All these efforts give us hope that, in following the same policies, we can continue with our economic growth and make important steps towards removing the obstacles to creating serious investment with the private sector and also boosting exports of services and commodities in oil, gas and petrochemicals.

"At the same time, this will lead to an improvement in other sectors of the economy."

National development

Jahangiri told the conference that this was an appropriate pattern for the country's national development. "We do not have any other choice than joining the global trade links if we want to be present in the international arena. In order to make competition, we should try to improve our efficiencies, knowledge, awareness, wisdom, know-how and expertise."

Turning to Iran's future oil development, he said the models of the new Iranian oil agreement were based on the realities of today's market.

"The investments in the future of oil and gas become so attractive that we will be able to attract the foreign investment required," he professed.

Jahangiri stressed that Iran was determined, in a short period of time after signing new oil contracts, to increase its oil production capacity to bring it up to the same level as before the sanctions were imposed.

"In this way, the country would take back its former position in the global oil industry. This is possible and can be considered as a framework for international cooperation," he added.

Boosting output

Iran's Petroleum Minister, Eng Bijan Namdar Zangeneh, endorsed this approach, telling the *OPEC Bulletin* at a press conference that once the sanctions were lifted the crude oil development plan entailed boosting output immediately.

"After six months, oil production will be close to 3.8 million barrels/day, rising to 4m b/d by the end of the current Iranian Year in March 2016," he disclosed.

Rokneddin Javadi (r), Deputy Petroleum Minister and Managing Director of the National Iranian Oil Company, pictured at his press conference with Mohamad Naseri, Head of Public Relations at the NIOC.

According to official data provided by Iran to the OPEC Secretariat in Vienna, the country's crude oil production in March this year stood at a little of 3m b/d.

Speaking earlier at the opening ceremony, Zangeneh, also expressed optimism over Iran being able to once again be elevated into the top rank among global oil and gas producers.

In pointing to the importance of the annual Exhibition, he explained that a great amount of technology transfer and expertise was involved in developing Iran's petroleum industry.

However, the Minister mentioned that the lifting of the economic sanctions did not mean that domestic manufacturing would be forgotten.

"In removing the sanctions, we should aim to implement our important policies of economic resistance. That means we should try to use the opportunity for deepening our involvement in the transfer of national technology," he maintained.

Zangeneh said that, of course, with the sanctions removed Iran would invite the foreign companies it previously did business with to further invest in the country.

He had high praise for the country's domestic

Some 600 foreign companies were represented at the Oil and Gas Show.

industries, telling the audience that today they had become very strong and wise and, because of the sanctions, even stronger.

"So when the sanctions come to an end, this does not mean we close our own industries. No, in fact, we are going to strengthen them further. This can be performed by encouraging them to continue their operations and to ensure they have access to other markets," he affirmed.

"If we have strong domestic firms, then naturally market demand for construction equipment will be further strengthened, not only for Iran, but at a regional and international level," he asserted. "We are pursuing various projects onland, offshore, as well as reconstruction of equipment in both the upstream and downstream sectors."

Investment for projects approved

Zangeneh announced that the government's Economic Council had approved more than $70 billion for petroleum industry projects, including the development of oil and gas fields and their optimization, in the last calendar year, which ended on March 20.

"For this we are looking at cooperation between the public and private sectors. In this way, new achievements will be attained by Iran. We need to have more EPC companies, an area where we are relatively weak. Parliament has given permission to instigate widespread development projects and we have the various plans, including the construction of gas pipelines. All this work will be done by Iranian contractors."

Zangeneh said he was also hopeful the sanctions would come to an end so that the country would be able to "continue our interaction with the world". Such a move, he added, would remove some of the obstacles facing the country, which would be able to continue with its growth.

"The future of the country is very bright and we have shown that even under difficult circumstances, we have managed to continue our efforts and hard work, from which and we have benefitted.

"All countries of the world will then be able to benefit from the potential that Iran has to offer, particularly in the oil and gas sector. Now is the time that everyone should we aware of the potential and the capacity that we have," he stated.

There is no doubting that the annual Oil and Gas Exhibition, which was first held in 1995, is proving to be a perfect focal point for the country's business activities.

As Mohamad Naseri, Head of Public Relations at the National Iranian Oil Company (NIOC), and Executive Manager of the Exhibition, said at the opening session, the show had grown immensely from the very small area it initially occupied.

"Today, it occupies a very large space with stands

The stand of the Iranian National Petrochemicals Company.

that are showcasing all manner of products, equipment and new brands," he said.

The Exhibition, said Naseri, highlighted the capacity and potential of Iran in the fields of engineering, oil and gas and scientific research. It was also a good opportunity for foreign concerns to display their products and services in the oil and gas and related industries. At the same time, it paved the ground for joint ventures and investment.

This year, continued Naseri, some 39 countries were represented at the show, including Britain, France, Germany, Italy, Spain, Russia, Ukraine, South Korea, China, India and Singapore, which was seven more than in 2014. Some 600 foreign companies were in attendance, alongside 1,200 Iranian firms. In total, there were 2,151 separate booths, located in and around the 45 exhibition halls and tents covering the Fairground.

One of those booths belonged to the OPEC Secretariat, which is invited to attend the Exhibition each year. Over the four days, it received many visitors enquiring about the Organization's activities and seeking its special publications.

Importance of gas to Iran

One such visitor, Eng Hamid Reza Araghi, Deputy Minister of Petroleum and Managing Director of the National Iranian Gas Company (NIGC), spoke to the *OPEC Bulletin* about the increasing importance of gas to his country.

Iran has the second largest natural gas reserves in the world after the Russian Federation and plans to virtually double existing production over the next few years.

Araghi said current gas output stood at 600 million cubic metres a day, which was mostly consumed domestically.

The plan, he said, was to boost this by 400m cu m/d by 2019 , which represented "a huge undertaking".

He stated: "At the moment we are ready to export gas and use it for injection to boost oil production. We can export it to our neighbours, like Iraq, Kuwait, Oman, Pakistan, Afghanistan, Turkey and other countries.

"And we are also ready to export to Europe if the consumers are ready. In the future, gas will be more important than oil for Iran," he maintained.

Concerning the sanctions, Araghi stressed that the country needed to use them as an opportunity, explaining that as one could see at the Exhibition, a lot of companies in Iran were showcasing their products, commodities that were previously not available in the country.

"This is a big opportunity for Iran. But if in the future we can have cooperation with other companies overseas, we can also get the high technology we need," he added.

Another visitor to the OPEC stand was Pars Oil and Gas Company (POGC) Managing Director, Aliakbar Shabanpour, who stated that the annual Exhibition was

Many visitors were interested in the impressive NIOC stand.

extremely important for companies like his, in fact for all subsidiaries of the NIOC.

POGC is the NIOC affiliate responsible for developing Iran's South Pars and North Pars gas fields.

"In my opinion, this show, which presents both domestic and foreign firms, has shown how they are progressing with their operations. When I compare this with last year's show, I can confidently say that not only are their products now better in quality, but their range of commodities has also increased," he said.

Shabanpour pointed out that for POGC, one of the biggest development companies in Iran right now, it was very important for the firm to know this capability existed.

Quality of products enhanced

"Year after year, the quality of the products has increased. The question remains when the sanctions are lifted as to how the domestic Iranian companies will merge with the foreign firms. As Petroleum Minister Zangeneh has said, there are great opportunities ahead for both sides.

"But we have many projects planned in all areas of the petroleum sector and I do feel that the domestic companies and foreign firms will be able to share in these schemes."

Shabanpour revealed that, as far as POGC was concerned, most of the development contracts it was currently involved in concerning the Pars fields had already been awarded, but he was in no doubt that with the lifting of the sanctions, the company's future operations would be made easier.

Dr Mehdi Asali, Iran's OPEC National Representative, also spoke to the *OPEC Bulletin* about the Exhibition, stating that he thought it was quite natural there were more companies participating in this year's Exhibition, "because everyone appreciates that the sanctions are going to be lifted more or less in the near future."

Also visiting the OPEC stand, he said the big participation from foreign companies was extremely important since Iran was planning to expand its production of oil, gas and petrochemicals.

"These companies offer the specialities we need and obviously they would want to invest in the country once the sanctions are lifted. And quite frankly, Iran is an ideal country in which to invest. We have abundant energy resources and a young population and a conducive business environment. We mean business," he contended.

He said he was particularly pleased to see so many different foreign companies represented at the Exhibition. Countries like Poland, Germany, Spain and

The NIGC stand attracted similar attention.

France. "All these countries can invest here because we have both upstream and downstream and for every company there could be some opportunity."

Asali agreed that next year's Exhibition could be significantly more important if the sanctions were lifted and he felt the organizers would have to prepare things much earlier than normal in order to accommodate all the companies wanting to attend.

"Maybe they will have to rationalize the existing space available at the exhibition site. The fact is that every year this show, which is now the biggest in the Middle East, is expanding," he added.

Concerning the sanctions, Asali also asserted that one advantage of their imposition was that domestic companies had needed to step up their activities and invest in the equipment and tools they needed.

"Perhaps from a quality point of view, it is lagging behind, but at least they have been providing the basic equipment that local industry has needed," he said.

Asali said that in keeping with the development of Iran's oil and gas resources, the country needed the assistance of the international oil companies who could provide the necessary expertise, technology and finance.

"The opportunities are really so vast and they provide a good opportunity for everyone," he affirmed. "The foreign companies that have attended this show just want to do business with Iran."

Also commenting on the Exhibition during his visit to the OPEC stand was H. Noghrehkar Shirazi, Secretary General of the Iran Chamber of Commerce, Industries, Mines and Agriculture.

He stated that the annual event was very important for Iran and all countries involved in oil and gas, petrochemicals and refining, especially neighbouring countries.

"Iran has 15 neighbours, some of them very important in oil and gas, and some of them very important in petrochemicals," he observed.

"This Exhibition has a very good perspective for the present time and for a future active programme between Iran and its neighbouring countries, as well as for many European firms, and those in Asia and Latin America.

"Iran is one of OPEC's Founding Members and, right now, its gas activities are very important," he said.

European companies present

"We are very happy to see the European companies at the Exhibition this year. This is a very good opportunity for all countries involved in energy."

Dr Mehdi Asali, Iran's OPEC National Representative, visits the OPEC stand.

OPEC's stand at the exhibition attracted many visitors interested in finding out more about the Organization's activities.

Shirazi pointed out that before the sanctions were imposed, Iran had actually witnessed an even bigger participation at the Exhibition from countries around the world.

"Today, it has proven to be a very good event for the country. I think all of the countries here this year are thinking about their economic positions and how they can expand their business activities.

"These companies are thinking about bilateral, tri-lateral and multilateral cooperation with Iran. The firms have a significant role to play in Iran's expansion of oil, gas and petrochemicals.

"We have many projects in these areas at the moment and their participation in the upstream, downstream, sidestream, as well as middle-stream — this all represents opportunities for companies, both Iranian and foreign.

"We are very hopeful for the near future. We are now thinking about the positive reaction about the current matters and we are very hopeful about the eradication of the sanctions. We should continue to think about the positives," he told the *OPEC Bulletin*.

One of those positives is obviously connected with the growing amount of interest from foreign companies in the Exhibition, who are jockeying for position in the country's future development programmes.

Speaking to officials attending the Exhibition, the level of excitement surging through business circles that huge change could be just around the corner becomes immediately apparent.

Business point of view

The sales manager of one European oil services company present told the *OPEC Bulletin* that the firm's decision to have a stand at the event was an easy one to make from a business point of view.

"The Iranian market represents a huge opportunity for companies like ours. It is not just the oil, gas and petrochemicals businesses that can prosper, but other related services, of which there are many. It is extremely attractive with numerous opportunities. Just look around the Exhibition site — there is everything on offer here.

Pictured at the OPEC stand (l–r): OPEC staff, Mahid Al-Saigh, Senior PR Assistant and Ms Tania de Vasconcelos Inacio, PR Coordinator, and from the Iranian Petroleum Ministry's OPEC Affairs Directorate, Ehsan Jenabi and Ehsan Taghavinejad.

"We felt when signing up for the Exhibition that we simply could not afford not to have a presence there. It is a massive show with lucrative benefits. And it is getting bigger with each passing year. Showing willing now could be the difference between securing or losing contracts once the environment changes for the better," he explained.

And looking towards next year's 21st Iranian Oil Show, the event promises to be an even busier affair than this year, especially if the sanctions are lifted.

High demand for space

Sohrab Azimikhah, Head of Exhibition Affairs at NIOC Public Relations, said demand for space at the Exhibition had already been very busy this year.

In fact from the time the official catalogue of attendees had been printed to the day of the show, a further 200 companies from overseas had been added. They had also added a number of outside tents to accommodate all those wishing to take part.

The show had been held over the same area of ground as in 2014, but this year they had to reduce the size of the plots interested parties could have. This meant that more exhibitors were able to participate.

Azimikhah stated that, next year, they hoped that with the removal of the sanctions to be able to invite companies from all over the world.

This could prove a headache with the amount of space available, but the idea already was that if demand was very high they might need to limit entrants to oil and gas exhibitors and not so much to the other industries.

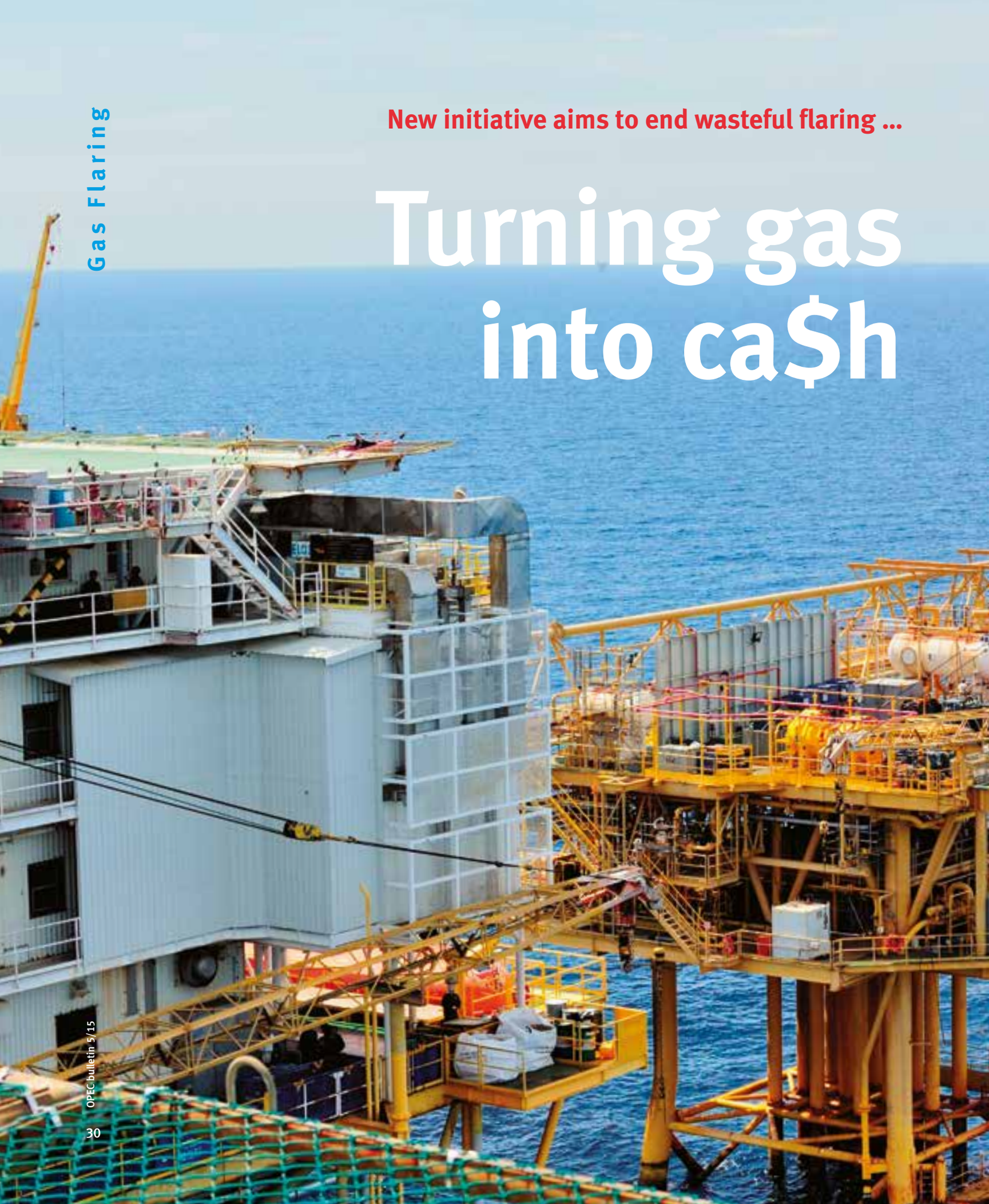
"We will have to look at how we can manage this," he said.

The NIOC's Naseri said that in the light of the fact that the 2016 Exhibition could create huge demand they were planning to have early interaction with all the concerned organizations and companies through the various websites.

They would also monitor other international exhibitions, in order to create a better atmosphere at the Iranian show. "We would also have better interaction with foreign companies," he added.

New initiative aims to end wasteful flaring ...

Turning gas into ca$h



International commitments have been made for the first time to end the practice of routine gas flaring, including capturing this valuable energy resource and reducing its environmental impact, thus turning a new page in the story. Many OPEC Member Countries have been ahead of the movement. The OPEC Bulletin's ***Maureen MacNeill*** *reports.*

The reasons that countries flare gas are varied. They may be economic, regulatory or technical. One thing is for sure — in a world where climate change has become a looming issue and where gas flaring is seen as environmentally threatening, the need and pressure to stop flaring has become more urgent.

Every year, around 140 billion cubic meters (bn cu m) of natural gas produced together with oil is wastefully burned or flared at thousands of oil fields around the world, according to a press release from the April 17 launch of an Initiative entitled *'Zero routine flaring by 2030'*.

Chief executives of major oil companies, along with senior government officials from several oil-producing countries, agreed on this day to end the practice of routine gas flaring at oil production sites by 2030 at the latest.

United Nations Secretary-General, Ban Ki-moon, speaking during the launch of the 'Zero routine flaring by 2030' initiative.

"(Flaring) results in more than 300 million tons of carbon dioxide (CO_2) being emitted into the atmosphere — equivalent to emissions from approximately 77 million cars," states the news release.

"If this amount of associated gas were used for power generation, it could provide more electricity (750bn kilowatt hours) than the entire African continent is consuming today," it observes.

OPEC Member Countries are currently responsible for a little over 40 per cent — or 60bn cu m — of the 140bn cu m of gas flared globally.

The Global Gas Flaring Reduction Partnership (GGFR) — initiated by the World Bank and the government of Norway and launched in 2002 at the World Summit on Sustainable Development in Johannesburg, South Africa — was instrumental in drafting the text of the new Initiative. But all partners have yet to endorse it.

"Some GGFR partners endorsed the Initiative at the outset and we are confident others will in the near future," says Zubin Bamji, spokesman for the World Bank's Energy and Extractives Global Practice. "We have just launched the Initiative and for some companies and governments it can take more time."

Currently there are ten countries, ten oil companies and seven development institutions endorsing the Initiative, though GGFR works with many other countries on their flaring reduction efforts.

The endorsers collectively represent more than 40 per cent of global gas flaring. They have committed to publicly reporting their flaring and progress towards the target on an annual basis, refraining from flaring in new oil field developments, and ending their ongoing legacy flaring by no later than 2030.

The Initiative was launched by United Nations Secretary-General, Ban Ki-moon, and World Bank Group President, Jim Yong Kim. They were joined by Royal Dutch Shell Chairman, Jorma Ollila, Statoil Chief Executive Officer, Eldar Sætre, Norwegian Foreign Minister, Børge Brende, and several other senior government and corporate officials and representatives of international development banks.

From OPEC Member Countries, endorsers include Angola, Petroamazonas EP (Ecuador) and the Kuwait Oil Company (KOC).

"Gas flaring is a visual reminder that we are wastefully sending CO_2 into the atmosphere," said Jim Yong Kim at the launch. "... together we can take concrete action to end flaring and to use this valuable natural resource to light the darkness for those without electricity."

Positive image for OPEC

The effort to reduce flaring has the potential to not only create a positive image for OPEC Member Countries, but help them to meet some of their energy needs, says Bamji.

"The World Bank believes that an initiative to set

a target date for ending routine flaring will have a real impact on how countries and companies approach development of new oil fields and how they tackle the problem of ongoing 'legacy' flaring," he maintains.

Some of the Gulf countries are already best in their class and have been forerunners in flaring reduction, according to Fabrice Mosneron Dupin, Advisor to the GGFR. "In some, if not all, cases they are already somewhat compliant … they flare very little, if at all," he notes, in particular reference to Kuwait, Qatar, Saudi Arabia and the United Arab Emirates (UAE).

"They flare very little in comparison to their level of production. An important indicator is what we call flaring intensity, which is the volume of gas flared compared with the number of barrels you produce. And in that, they are champions."

In fact, the first country to tackle the issue, far ahead of the others, was Saudi Arabia, according to Dupin. "In the 1970s, the Kingdom launched a huge programme of collecting gas to use in productive ways, like power generation, the petrochemical industry and industry in general," he observes.

"It has been very powerful and efficient and not only that, the Kingdom launched a new programme two or three years ago," he adds.

The second OPEC Gulf country to get involved in flaring programmes was the UAE, which started in the late 1990s or early 2000s and has almost eliminated flaring, says Dupin.

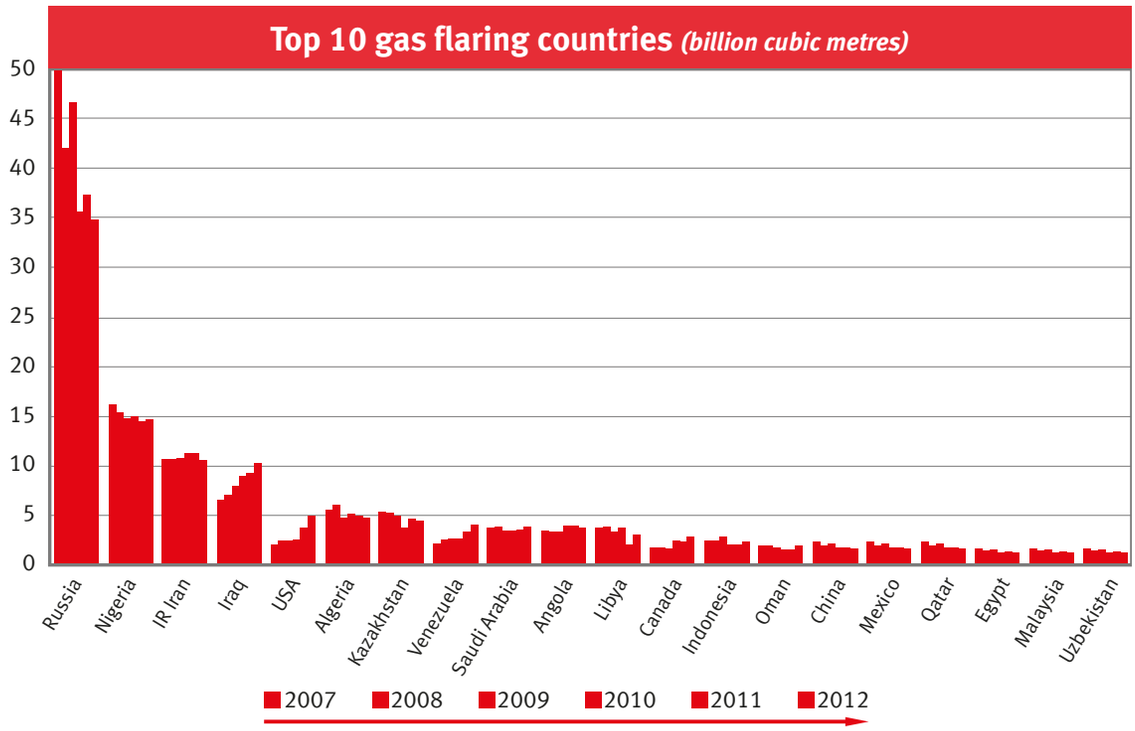
Why? Because they need the gas and do not want to burn so much oil for power generation. For the same reason, Kuwait and Qatar came along somewhat later. They also had the political will behind the decision to drive it forth, he states.

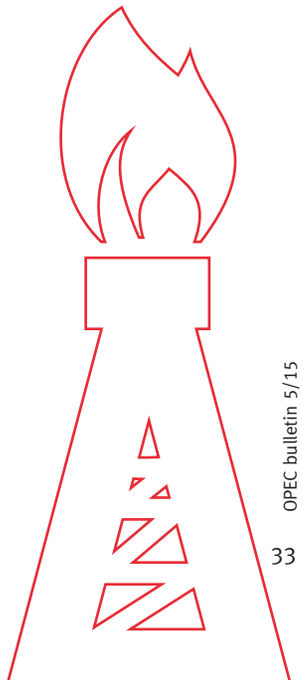
"Over the last few years, we have seen substantial progress in flaring reduction by several companies and countries in our partnership," notes Bamji. "Tremendous progress has been made in countries like Kuwait, where associated gas utilization is now at about 99 per cent."

"… we have reduced KOC gas flaring from 17 per cent in 2005 to about one per cent today and we are committed to further reduce gas flaring in all aspects," declares Hashem S Hashem, CEO of the Kuwaiti national upstream firm, in an Initiative press release.

In Qatar, flaring decreased by 50 per cent to less than 1bn cu m annually, making the country one of the best in the world in terms of flaring intensity, contends Bamji.

Their success was made easier by the fact that the decrees came from a government level. The government asked the national oil companies (NOCs) to manage the issue, says Dupin. "In Qatar … I remember someone explaining this to the chief when he visited the facilities





and he said, 'I don't want to see this flare anymore'. Six months later there was no flare."

Some of the Gulf countries also have less economic constraints; it is easier to put a programme in place in a rich country than in a poor one, observes Bamji. "When you have an NOC which is sufficiently wealthy to invest and a government that tells this NOC to do this reduction process, then it works well."

The CEO of Ecuador's Petroamazonas, Oswaldo Madrid, states in a press release: "Ecuador is one of the most environmentally and biologically diverse sites on the planet. The government's policies have motivated our company to develop a new oil industry model to ensure our natural resources are not wasted."

Although progress is being made in Nigeria, which flares the most in the world second to Russia and is the worst flarer in the world in terms of intensity, there is still much work to be done in the country, states Bamji. Iraq, Iran and the United States are the next largest flarers, in that order.

"There are the estimated financial losses, particularly in countries that can least afford to waste a valuable energy resource. For example, a recent report from Nigeria's Department of Petroleum Resources indicates that Nigeria loses $4.9 million daily when the value of flared gas is computed at the price of $3.50/1,000 standard cubic feet of gas. At that rate, the loss amounts to well over $1.7bn per year."

Barriers to success

Countries and oil companies flare for a variety of economic, regulatory and technical reasons, according to Bamji. "Sometimes the volumes of flared gas are small at a specific location, making it difficult to justify capturing it and delivering it to a market, particularly if there are concerns about what payment flow for the gas could be achieved from the market in question," he explains.

In other cases, the location of an oil production site may be far from existing infrastructure and expensive to connect to. In any case, the impact on the environment and financial losses are significant.

If the price of gas is too low to justify investing in the collection and use of the gas and the economics are not good, then investors will not get involved, he stresses.

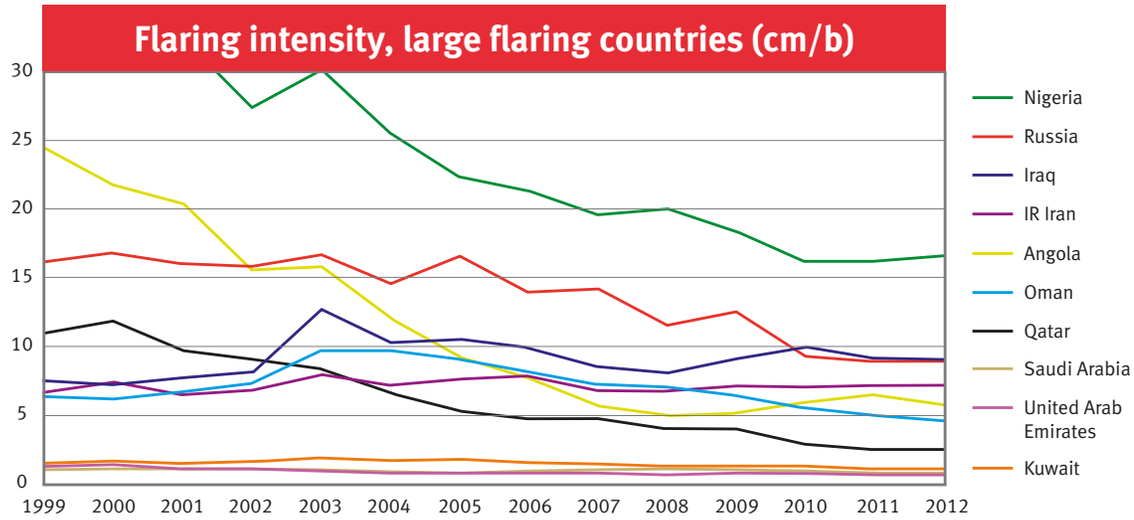
"It is mainly an economic issue. However, being poor is not an insurmountable barrier. If a country provides a good contractual and regulatory framework, a project may become economic," professes Dupin.

"Iraq has launched a huge project with Shell to collect 1bn cu m of gas per day. That is a very good example where a state provided the right framework to allow a company to invest in collecting the gas and making use of it," he says.

"It is a great example," confirms Bamji, stating that for the country to be able to focus on something like gas flaring is really remarkable in the light of the political issues it is facing. "If Iraq can devote its attention and resources to something like that, it really sets an example for others."

The goal in the end is to advance technology, repeat it, and have it become cheap enough that it becomes a win-win for countries.

The GGCF tries to promote new technologies. "What



we can say is that the economics, the cost of the devices are being reduced consistently and we hope that we will reach an economical cost within three years," maintains Dupin. "At the same time, with the price collapse, the economy of these projects may be affected ... and it could be put off."

Beginnings of the GGFR

Bjorn Hamso, GGFR Programme Manager, states that the GGFR started because several oil-producing countries and oil companies recognized it was time to join forces and develop a public-private partnership on this topic to share ideas, strategies, technical solutions and best practices.

"The World Bank was an ideal institution to host the GGFR secretariat because of its expertise and work in the energy and extractives sectors and because of its global reach," he notes.

The organization is approached by countries and companies and, at the same time, the GGFR reaches out to countries when it sees it can help. The partnership has relatively little direct involvement in specific gas-flaring reduction projects.

"We focus predominantly on technical solutions, regulation, knowledge-sharing and other aspects, rather than project implementation," explains Hamso. "Our role has been more of a support role in bringing the parties together to help governments and oil companies look for solutions and help them coordinate their flare reduction efforts."

The best way to eliminate routine flaring is to develop and enforce effective gas-flaring regulations and policies, which is already being done in several countries and by several oil companies.

How quickly a country can reduce its flaring is often connected to government energy policies and its ability to execute them. Thus, the organization leverages World Bank expertise and resources by bringing flaring solutions into the Bank's broader energy and extractives work programme, notes Hamso.

"Again, Nigeria is a good example where World Bank guarantees for government performance (such as timely pay for received energy) will help reduce gas flaring," he says.

"Hopefully, the '*Zero routine flaring by 2030*' Initiative will prompt many governments and oil companies to follow the lead of major international oil companies and

Large offshore oil rig at night.

not accept routine flaring in new oil field developments. Simply stated, this is responsible climate and resource management policy," says Hamso.

Different fields

"It is also important to keep in mind that some fields have much more gas associated with the oil they hold than others," points out Dupin. "In the Gulf, it is quite easy to compare because the gas-to-oil ratios, or the amount of gas dissolved in the oil, is more or less the same. But in other countries there is a much higher ratio of gas in the oil."

Nigeria, Iran and Iraq are top of the list in the world in terms of highest flaring intensity, with Russia coming slightly below. It seems that although correlations are not complete, the lighter the oil (with a high API), the higher the ratio of gas to oil.

In terms of OPEC Member Countries, the GGCF spends a lot of effort focusing on Nigeria and Iraq, though "each case is different," says Dupin.

It is important to find a use for the gas, whatever the volume produced. The economics are naturally better when there are more significant volumes. "We try to promote and share knowledge on technology to use smaller volumes of gas on site," states Dupin.

Enhanced oil recovery (EOR) is the easiest way to use the gas, but it is not feasible or useful in all types of geology. Other options are gas being used to generate power for facilities, or gas-to-liquid (GTL), when gas is turned into a liquid and shipped on trucks. In this case, gases are converted into liquid synthetic fuels either via direct conversion — using non-catalytic processes that convert methane to methanol in one step — or via syngas as an intermediate.

"GTL is not really economical, but the technology is progressing and we hope that in a couple of years we will have some good economics on this kind of project," says Dupin.

The products of this can often be injected into a pipeline flow if there is a pipeline nearby. "GTL is still considered an expensive technology and not widely implemented in small-scale plants suitable for eliminating flares. However, the GTL industry seems to be gaining momentum," stresses Bamji.

It is also possible to liquify the natural gas (LNG) using a low temperature, though the economics are still weak for this solution as well, with hope on the horizon.

Viable technical solutions are important; for example, gas can be separated, with heavier components shipped to market — such as propane, butane and natural gasoline — while lighter gas components, primarily methane,

Continued gas flaring is perceived as being a waste of a valuable energy resource.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World Bank

Delegates took time out for a group photo during the launch of the 'Zero routine flaring by 2030' Initiative. Here pictured with United Nations Secretary-General, Ban Ki-moon (sixth right), and World Bank Group President, Jim Yong Kim (seventh right).

can be sent to a small power plant, which can also be used at the oil production site.

The Gulf countries are currently using most of the gas they capture for power and petrochemicals, with methane for power and ethane for petrochemicals. "Quite often you have both in the gas stream," Dupin says.

Climate change

Awareness of flaring has been unquestionably heightened due to climate change talks and discussions about the industry's role in mitigation, observes Bamji.

"In December, Paris will host the UN Climate Change Conference or COP 21 and gas-flaring reduction could certainly be one of the contributions an oil-producing country could make," he maintains. "So gas flaring will receive increasing attention over the next several months because of this new Initiative and the UN negotiations."

The UN's Ban Ki-moon said at the April launch: "As we head towards the adoption of a meaningful new international climate agreement … these countries and companies are demonstrating real climate action. Reducing gas flaring can make a significant contribution towards mitigating climate change. I appeal to all oil-producing countries and companies to join this important Initiative."

The oil industry in general is under pressure and being painted with the brush of producing a lot of CO_2 and other types of pollution and pushing climate change ahead, agrees Bamji.

Eliminating flaring is an opportunity for oil-producing countries to show they are putting their good foot forward and working on the issue, he says. In fact, stopping flaring would considerably reduce CO_2 contributions from oil, he adds.

By endorsing the Initiative, governments, oil companies and development institutions recognize that routine gas flaring is unsustainable from a resource management and environmental perspective, states a World Bank news release.

"They understand the industry cannot ignore that anymore … it has to work to be more acceptable to the international community," adds Dupin.

Focus on Iraq

Bringing power to the people

By Maureen MacNeill

Workers adjust the valves of oil pipes at the West Qurna oil field in Iraq's southern province of Basra.

Bringing gas from wells that used to be wasted through flaring to the light switches and power sockets of people's homes in Iraq, the Basrah Gas Company (BGC) is one of a kind.

Iraq is a very good example of the state providing the right framework to allow a company to invest in collecting and making use of gas, according to Fabrice Mosneron Dupin, Advisor to the Global Gas Flaring Reduction Partnership.

BGC is already making an important contribution to the integrated energy supply chain in southern Iraq — in the summer of 2014 electricity availability in Basrah city was significantly higher than in the summer of 2013.

BGC — an Iraqi company with a public/private partnership — was established by the Iraqi government in May 2013. The largest gas project in Iraq's history, it boasts a staff of over 5,500 and assets in many locations, including two major gas-processing plants, more than a dozen compression stations and a marine and storage terminal. In order to be successful, the project requires fixed infrastructure and cooperation from many participants.

The 25-year joint venture is unique in Iraq. It consists of the state-run South Gas Company with a 51 per cent stake, Shell (44 per cent) and Mitsubishi (five per cent). The mid-stream project is designed to capture, treat and monetize associated natural gas that is currently being flared in West Qurna 1 (ExxonMobil), Zubair (Eni) and the largest oil field, Rumaila (BP).

It is the responsibility of joint ventures at the three giant oil fields to produce oil and separate out the associated raw gas which is then supplied to BGC. The company then separates the gas into dry gas for power generators and valuable liquids to make liquefied petroleum gas (LPG), which is primarily used for domestic cooking.

BGC is Iraq's main producer of LPG, which must otherwise be imported. Finally, power generators turn fuel into electricity.

Once domestic energy needs are met, the country could potentially in the future export excess LPG and condensate for the first time.

The Government plays a critical regulatory role in ensuring that all the companies fulfil their commitments and that the necessary long-term planning to ensure essential infrastructure is in place.

Rehabilitating facilities

BGC is currently working as quickly as it can to rehabilitate the gas infrastructure inherited from the South Gas Company. In the last 24-plus months, it has been inspecting, repairing and upgrading thousands of kilometers of pipeline, more than 18 compressor stations, two major gas-processing plants and a marine and storage terminal.

In addition, it has been undertaking a series of targeted crossover and compressor projects which have resulted in some quick wins in terms of increasing overall gas-gathering capacity.

Since the start of operations, gas-processing capacity

volumes have doubled, and in March 2015, a record 515 million standard cubic feet of natural gas per day was produced, along with a record 3,075 tonnes of LPG — volumes not seen for more than a decade.

These capacity increases provide equivalent dry gas to light up more than 3.5m homes and enough LPG to supply more than 150,000 cylinders per day to the domestic market.

Plans include an expansion phase, which will see additional gas-gathering and compression, as well as more gas-processing and power-generation facilities. Specific project progress:

- Currently, BGC is commissioning a 50-megawatt power plant in Khor Al-Zubair (KAZ). The power plant feeds electricity to BGC's facilities in KAZ, making it independent of the national power grid, which will free up vital power for domestic use.

- BGC has awarded four major contracts to General Electric, Saipem, Technip and Chiyoda to rehabilitate compressor stations, NGL plants and pipelines in North Rumaila and Khor Al Zubair, as well as to construct the Umm Qasr Marine and Storage Terminal; these are now being successfully executed. Through this first wave of fast-track activities, production capacity is expected to increase to one billion cu ft/d.

- Rehabilitation of the 40-inch West Qurna-1 (WQ) pipeline and upgrading of the gas-gathering system are ongoing. Once completed, it will allow the WQ field to be connected with the treatment plant in North Rumaila and capture the associated gas which used to be flared from WQ for the first time. Today, it is estimated that WQ produces around 200m cu ft/d of gas, which once captured and treated could generate in excess of 20m LPG cylinders per year and enough dry gas to light up more than 1.5m homes (based on the average monthly home consumption of 300 KWH per month).


Reuters

The BGC project is aiming to light up millions of homes in Basrah.

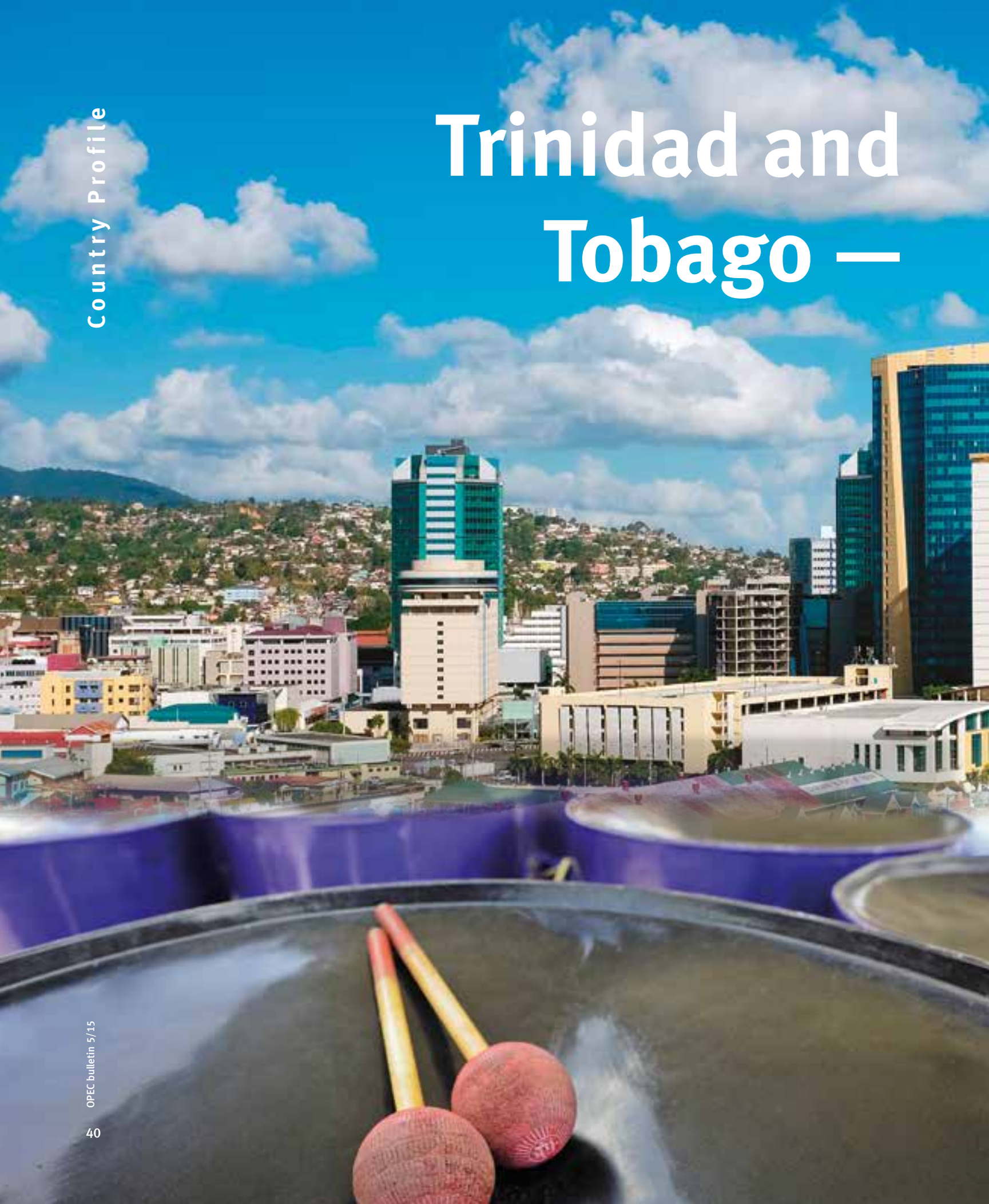
- As part of the expansion phase, the Front End Engineering Design (FEED) phase of a project is underway to construct a new natural gas liquids (NGL) plant in Ar Ratawi with a first-phase processing capacity of 530m cu ft/d and potential expansion to a total of 1,060m cu ft/d. Once commissioned and running at full capacity, this plant is estimated to be able to provide additional domestic gas for power generation sufficient to supply some 4,000,000 homes.

Developing Iraq's human energy

BGC is also developing the capacity of another of Iraq's greatest resources — its human energy. The company employs technical experts from more than 30 different nationalities working alongside their 5,100 Iraqi colleagues and is committed to transferring their extensive knowledge.

In addition, a large-scale training programme is underway which provides Iraqis with the opportunity to achieve internationally recognized standards. To date, they have delivered more than 65,000 man-days of training to Iraqi staff in a programme that is still accelerating.

Trinidad and Tobago —



from oil barrels to steel pan music

Trinidad and Tobago is a twin-island country located in the Caribbean, just to the north-east of the South American continent. It is a mere 11 kilometres off the coast of OPEC Member Country Venezuela and south of Barbados and Grenada in the Lesser Antilles. Covering an area of 5,131 sq km, the country has a population of 1,341,000, most of whom reside on the island of Trinidad, in the country's capital of Port of Spain and in its largest city, Chaguanas. In addition to the two main islands of Trinidad and Tobago, the country also comprises several smaller landforms, including Chacachacare, Monos Huevos, Gaspar Grande, Little Tobago and St Giles Island.
In this article, the OPEC Bulletin's *Scott Laury looks at how the Caribbean's largest oil and gas producer has transformed oil barrels into a unique musical form that now resonates around the world.*

Pictured is the King's Wharf in Port of Spain, Trinidad.

To the normal observer, Trinidad and Tobago may seem like just another sleepy, wind-swept Caribbean island paradise. This may be partially accurate, especially the part about an island paradise.

However, the *sleepy* adjective might not fit too well, as we are talking about the third richest country by GDP per capita in the Americas after the United States and Canada. This solid economic standing is due predominantly to its substantial oil and gas reserves and exploitation.

An economic leader in the Caribbean

Trinidad and Tobago is the Caribbean's largest oil and gas producer and, as of 2013, it ranked as the sixth-largest exporter of liquefied natural gas (LNG) in the world, according to BP's *2014 Statistical Review of World Energy*.

Its proven crude oil reserves are estimated to be 728 million barrels (2014), and in 2013, the country produced 118,000 b/d of petroleum and other liquids. Production peaked in 2006 at 179,000 b/d before fields began to mature and experience operational challenges.

Since then, the country has transitioned into a more natural gas-based sector. As of 2014, the country's proven natural gas reserves were estimated at 13.1 trillion cubic feet. In 2013, the country provided nearly 74 per cent of the United States' LNG imports.

With 11 ammonia plants and seven methanol-producing facilities, the country is one of the world's leading exporters of ammonia and methanol. Other industrial production includes urea, steel products, cement, cotton textiles, beverages and food processing.

With a GDP per capita (current prices) of $21,516 (IMF, 2015), Trinidad and Tobago is considered one of the most developed nations in the Caribbean. In fact, the World Bank listed it in the top 40 of the 70 high-income countries in 2010. In 2011, the OECD removed the country from its list of developing countries.

Though oil and gas account for about 40 per cent of GDP and 80 per cent of exports, tourism and manufacturing also play an important role in the nation's economy. As far as agriculture goes, the country mainly produces and exports cereal, sugar, coffee, vegetables, flowers, citrus and cocoa.

Work hard, play hard: it's carnival time

While economic prosperity has made it a beacon of light among its neighbours in the Caribbean and South America, the country has probably gained more renown internationally for its rich culture and music, especially its famous carnival.

There is no debating, Trinidad and Tobago is a country that knows how to relax and have fun.

In fact, it is known to have one of the world's most lively carnivals, along with Brazil, of course. It is the birthplace of the vibrant and percussive calypso, soca and chutney styles of music, just to name a few. The infamous limbo dance also originates from the country. These musical forms of expression have become standards in the world music industry and, perhaps, more importantly, at dance parties far and wide.

One of the driving forces behind much of this music is actually sourced from material used in the oil and gas industry. Well, sort of. Actually, it really gets down to the ingenuity and resourcefulness of the Trinidadians and Tobagonians, who in the 1930s discovered that they could use empty oil barrels to produce musical instruments.

Birth of the steel pan

And thus was born the steel pan, or steel drum instrument, which the locals claim to be the only acoustic musical instrument invented in the 20th century.

Over the years, this melodic percussion instrument

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An oil rig off the shore of Trinidad and Tobago.

has gained notoriety around the world as a solo instrument or as a percussive instrument that accompanies musical groups. Locally, though, there are full-fledged steel pan orchestras that perform throughout the year and figure prominently during the annual carnival celebrations.

Steel pans are produced from 55-gallon oil barrels and formed into different sizes to cover various tonal pitches on the chromatic scale. For example, the bass pan appears to be almost a full-sized oil barrel and produces low-ranging tones that provide the bass notes and back-beat of a particular song.

The baritone, alto and soprano pans, on the other hand, are subsections of the oil barrel that have been cut smaller, allowing them to resonate at a higher pitch and perform solos.

Each single pan is also built to play multiple tones through indentures or slats welded into the concave playing surface, allowing for a varied array of notes. The pan is played with a pair of sticks with rubber tips. The stick sizes and tips vary according to what type of pan is being played.

How it all got started

In the late 1700s, French planters arrived in Trinidad during the French Revolution and brought with them their pre-Lenten carnival traditions. The slaves, composed of West Africans and French creoles from other Caribbean islands, accompanied them, but were not allowed to participate in carnival. This prompted them to start their own festival, which they called *Canboulay,* a lively mix of percussion and dancing closely linked to their African roots and traditions.

In 1834, the slaves were emancipated, and the carnival tradition became more popular and boisterous than ever. Despite the slaves' newfound freedom, the British colonizers still intervened in their cultural celebrations, barring certain traditions involving drums and sticks.

In 1880, in response to a riot that occurred during the Canboulay celebrations, the British government banned African percussion music and traditional stick fighting.

This led to the advent of another percussive musical form called *tamboo-bamboo* (from the French word *tambour*, which means drum), which consisted of tunable sticks made out of bamboo wood that were hit on the ground and against other sticks to produce musical and rhythmic patterns. In 1934, this tradition was also banned.

A view of the Island of Trinidad.

Desperate for other options to express themselves musically, the locals scoured their surroundings to find anything they could get their hands on to play music again.

By 1937, they started to use frying pans, dustbin lids, metal car parts and oil barrels that had been discarded by the oil refineries around the country.

Eventually, after lots of experimentation with these rudimentary makeshift instruments, the multi-tone steel pan was discovered — a discovery that has held firm since that time and lives on to this day.

Because of the multiple sizes and large range of tonalities that were developed from the oil barrel, full steel pan ensembles, orchestras and bands began to form.

Steel pan takes the world by storm

Though steel pan music was a mainstay of the country's vivacious carnival, a milestone was reached in 1951, when the Trinidad All Steel Percussion Orchestra (TASPO) was invited to perform at the Festival of Britain, marking the first-ever performance of a steelband composed wholly of instruments made from oil barrels.

The success of this show led to countless other international appearances by TASPO and other famous steelbands as the contagious nature of this original art form caught on around the world.

Steel pan ensembles have a wide performance repertory, from interpreting traditional carnival calypsos to latin and jazz music to film and pop music, and even some classical compositions.

An international festival called the World Steelband Music Festival has been hosted on and off in Trinidad since 1964, and the world's largest steelband contest, called Panorama, is organized as part of Trinidad's annual carnival festivities.

Through the years, the steel pan has also gained notoriety through pop music recordings, including The

Left: Steel pan pioneer, Dr Elliot Mannette, tunes a TerraPan.
Below: The Exodus Steelband Orchestra performs on the streets of downtown Port of Spain, Trinidad, during carnival.

Hollies' song 'Carrie Anne' from 1967, the Loggins and Messina's 'Vahevala' in 1971, as well as on the jazz fusion recordings of Spyro Gyra and Andy Narrell.

Founding father of the steel pan

The founding father of the steel pan is widely considered to be 89-year-old Dr Elliot Mannette, a native of Sans Souci, Trinidad, who is credited with several innovations that eventually led to the instrument's current-day design.

He was reportedly the first to use the 55-gallon oil barrel and then further developed its design by sinking the top of the barrel to achieve a concave shape, allowing for the diverse range of notes that makes the instrument unique.

In the 1960s, Manette was invited to the United States to help develop the US Navy Steel Band. He ended up staying longer than expected and went on to spearhead several hundred steel bands around the US, many of them located at universities and colleges.

In 1991, he began a long affiliation teaching at the University of West Virginia, in what became known as the University Tuning Project.

Manette has received many awards over the years, both in his native Trinidad and Tobago and in the US. In 2003, he was inducted into the Percussive Arts Society's Hall of Fame.

After receiving notice of this honour, he made a statement, expressing his delight in how much progress had been made in making the steel pan an instrument known around the world, saying:

"I feel honoured to be chosen by this distinguished body for this prestigious award. Looking back more than half a century during my humble beginnings in this unique art form, no one during that period could have envisioned the rapid growth of this instrument.

"Through the years, as I developed my skills, my entire mind-set was sharing my knowledge with others for the betterment of this instrument. In receiving this Hall of Fame Award, I believe that PAS not only recognizes my accomplishments in the development of this art form, but is acknowledging that as the steel drum instrument moves into this next century, it is poised to take its rightful place among the world's orchestras."

He went on to conclude that without the oil barrel, even as tonally rustic as it sounded at the very beginning, this genre of music would never have come to be.

"I have to say that it was the sinking and tuning of that 55-gallon barrel," he said. "It was significant because, though it was crude and the tonal quality not very beautiful, it was the true birth of the art form."

A pristine beach in Englishman's Bay, Tobago.

Trinidad and Tobago: A rich history and a diverse people

Christopher Columbus discovered Trinidad in 1498 while on his third voyage. After spotting a group of three hills on the horizon, he was inspired to name the island after the Holy Trinity. At that time, the island was inhabited by the Arawak and Carib native tribes.

Europeans began arriving on the island nearly a century later. The first settlers were from Spain, who founded San Jose de Oruma, which was located near the current day capital city, Port of Spain. The Spaniards ruled until the British invaded and took over in 1797.

With the proliferation of sugar plantations on the island, thousands of slaves from Africa were brought in as labourers. After Britain ended slavery, plantation owners looked to Asia and the Middle East for indentured labour to work their crops.

Tobago, the smaller of the two islands, though not seen as a place to settle, was perceived to be a strategic possession and was therefore the source of much contention between warring parties through the years. One of the legends claims its name originated from the Spanish word for tobacco *(tabaco),* which was grown on the island.

Amerindian tribes were the first to battle it out over the island. And later came other conquerers, including France, the Netherlands, Spain, Latvia and England. It is said that control of the small island shifted hands over 30 times.

In the late 17th century, sugar, cotton, indigo and tobacco plantations popped up around the island. The French invaded in 1781, destroying much of the economic progress that had been made up to that point.

In 1814, Britain regained possession of Tobago, annexing it to Trinidad in 1889. The two-island nation then became independent in 1962, taking on the official name, the Republic of Trinidad and Tobago, in 1976.

A true cultural melting pot

With this rich and complex history and the many waves of migration and change it experienced through the years, Trinidad and Tobago is today a virtual tapestry of cultures, religions and ethnicities.

In addition to its native Amerindian roots, cultural influences in Trinidad and Tobago range from Africa and Asia (mainly China and India) to the European countries of France, Britain, Spain and Portugal.

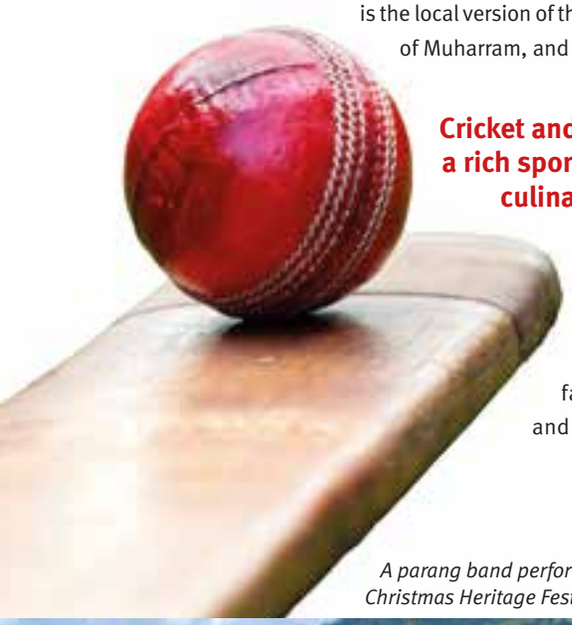
Though English is the official language, both islands communicate widely in creole, which combines the various elements of their European, Amerindian, African and Asian languages. Spanish is also spoken by a small minority of the population, as is the Bhojpuri language of India.

Religions and festivals

Religion is another area that testifies to the nation's diversity. According to a census taken by the country in 2011, Christianity is the main religion with an estimated 63 per cent of the population, followed by Hinduism with 18 per cent and Islam with five per cent.

Each year, the various faith groups have their annual festivals. Christians celebrate Christmas, Easter and other traditionally observed holidays. The Hindus observe the Diwali festival, celebrating the victory of good over evil, the Shivaratri festival in honour of the Hindu god Shiva, and Phagwah, a spring festival of colours.

In some parts of the country, Muslims celebrate Hosay, which is the local version of the Shia remembrance of Muharram, and Eid al-Fitr.



Cricket and callaloo: a rich sporting and culinary heritage

The country's sporting traditions have also been influenced by the many facets of its culture and history. Two of the most popular sports are cricket and football, which were brought to the islands by the British during their reign.

Trinidad and Tobago has also gained a reputation for producing track and field stars, with several athletes, especially sprinters, winning medals at the World Championships and Olympic Games. Other sports played on the islands include basketball, rugby, netball, baseball, tennis and golf.

But let us not forget the country's mouth-watering food, which blends together a wide variety of tastes and spices from Europe, Africa and Asia to create a unique creole cuisine.

Typical dishes include callaloo, stewed chicken, ox-tails, curried duck, beans or peas and rice, macaroni pie, as well as Indian curries and Chinese-based specialties.

The national dish is considered to be crab and callaloo, which consists of tenderly cooked crab that is served whole in a dark green, creamy soup or stew with green leafy vegetables, okra, pumpkin, coconut milk and lots of herbs and spices.

Sizzling music and dance

Perhaps the most prolific example of Trinidad and Tobago's richly diverse culture manifests itself through music and dance.

In addition to its yearly pre-Lenten carnival spectacle and Panorama steel pan competition, a wide variety of festivals with

Tassa drummers perform in the Harts Carnival presentation '50' in Port of Spain, Trinidad.

A parang band performs in Lopinot Village's Christmas Heritage Festival, Trinidad.

Typical Caribbean dish of callaloo served with fried plaintains.

music and dance have emerged from the population's cultural mix over the years. At Christmastime, parang is the traditional music that is played. It is a folk music brought to the islands by Venezuelan migrants of African, Amerindian and Spanish heritage. Traditionally, the music was performed on the move with singers and instrumentalists making impromptu celebratory visits from house to house in the community. Parang was later fused together with soca to form soca parang.

Soca music is a highly charged dance music blending calypso with Indian music and rhythms. Chutney is also a hybrid music form with a heavy Indian influence, combined with soca.

Rapso emerged from the social unrest of the 1970s and mixes together soca, calypso and American hip-hop beats.

Finally, Pichakaree is another Indian-influenced music form born in Trinidad and Tobago, which is performed in the Hindi, Bhojpuri and English languages, and often provides commentary on social themes.

Hometown literary heroes

Two Nobel Prize winning writers, VS Naipaul and Derek Walcott, have roots in Trinidad and Tobago.

Sir Vidiadhar Surajprasad (VS) Naipaul was born on August 17, 1932 in Chaguanas. He is a British citizen and was knighted in 1989 for his body of literary work. He then won the Nobel Prize for Literature in 2001 for, according to the Nobel Foundation, "having united perceptive narrative and incorruptible scrutiny in works that compel us to see the presence of suppressed histories."

Reflecting on his own diverse background and heritage, he conceded that his search for self-identity was an ongoing process, once commenting:

"In England, I am not English, in India, I am not Indian. I am chained to the 1,000 square miles that is Trinidad; but I will evade that fate yet."

Naipaul travelled the world extensively, rediscovering his roots in India and also spending time in Africa. On one of his Africa visits, he spent nine months in Kampala, Uganda, where he was writer in residence at Makerere University.

During this stay, he wrote his book entitled *The Mimic Men*. The book is a narrative on the life of an exiled Caribbean colonial official, Ralph Singh. Exiled in London, he remembers the splendid and exotic nature of the fictional Caribbean island of Isabella, where he had been posted.

"Coconut trees and beach and the white of breakers seemed to meet at a point in the distance. It was not possible to see where coconut turned to mangrove and swampland. Here and there, interrupting the straight line of the beach, were the trunks of trees washed up by the sea. I set myself to walk to one tree, then to the other. I was soon far away from the village and from people and was alone on the beach, smooth and shining silver in the dying light. No coconut now, but mangrove, tall on the black cages of their roots. From the mangrove swamps channels ran to the ocean between sand banks that were daily made and broken off, as neatly as if cut by machines, shallow channels of clear water touched with the amber of dead leaves, cool to the feet, different from the warm sea."

Parlatuvier Bay, Tobago.

Poet and playwright Derek Walcott was born in 1930 on the Caribbean island of St Lucia. After graduating from university, he moved to Trinidad, where he founded the Trinidad Theatre Workshop. He is perhaps best known for his epic poem *Omeros* (1990), which is loosely based on *The Iliad*.

Like Naipaul, Walcott addresses the themes of colonialism and post-colonialism in his work from a Caribbean point of view. He also explores religion and spirituality through his writing. Among his many awards over the years was the Nobel Prize for Literature, which he received in 1992. The Nobel Foundation selected Walcott "for a poetic oeuvre of great luminosity, sustained by a historical vision, the outcome of a multicultural commitment."

In his poem entitled *Midsummer, Tobago*, Walcott pays homage to the beauty of his beloved Tobago, while melancholically reflecting on the passage of time:

Cumana Bay, Trinidad.

"Broad sun-stoned beaches

White heat
A green river

A bridge
Scorched yellow palms

From the summer-sleeping house
Drowsing through August

Days I have held
Days I have lost

Days that outgrow, like daughters
My harbouring arms"

New Algerian Energy Minister appointed

Dr Salah Khebri, the newly appointed Algerian Minister of Energy.

Dr Salah Khebri, who has 36 years' experience in the Algerian oil and gas industry, has been appointed his country's new Minister of Energy, succeeding Dr Youcef Yousfi.

Khebri, who is married with three children, also has extensive experience in higher education and in managing studies of large oil and gas projects of the national energy company, Sonatrach, where he has held several positions.

Education

Regarding his education, he attained a Petroleum Economics Engineering degree as Valedictorian in June 1979 from the National Institute of Hydrocarbons and Chemistry, INH Boumerdes, Algeria.

He was then awarded two Diplomas of Advanced Studies (DEA), the first by the National Institute of Hydrocarbons and Chemicals, INH Boumerdes, in June 1981 and the second in Energy Economics, Quantitative Methods option, in September 1989, jointly by the French Petroleum Institute, IFP School, the University of Paris II and the University of Burgundy, France.

Khebri then attained his Master's degree from the University of Bourgogne, France.

His PhD in Economics was achieved in April 1993 at the French Petroleum Institute, IFP School and the University of Bourgogne.

Career

In his working career, Khebri was Professor and Head of Petroleum Economics Chair for the National Hydrocarbons and Chemistry Institute, INH, at Boumerdes, and French Petroleum Institute, IFP School, Rueil-Malmaison, France, and the University of Bourgogne, teaching Applied Operational Research, Econometrics and Petroleum Economics.

He was then Head, Department of Operations Research of Studies Planning and Prospective at Sonatrach from 1995–97.

Khebri then became Economics Studies Director at Sonatrach from 1998–2004.

He was appointed Managing Director of the Algerian Petroleum Institute, Corporate University, IAP-CU, in 2004, a position he held for three years.

In 2007, Khebri became Chairman and Chief Executive Officer of the Algerian Petroleum Institute, IAP Spa, where he remained until 2011.

The following year, he was appointed Economics and Management Adviser to the Chief Executive Officer of Sonatrach.

In the course of his official duties, OPEC Secretary General, Abdalla Salem El-Badri, visits, receives and holds talks with numerous dignitaries.

This section is dedicated to capturing those visits in pictures.

April 1

Dr Seyed A M Mousavi, Secretary General of the D-8 Secretariat, visited Abdalla Salem El-Badri, OPEC Secretary General.

May 6

Yosuke Takagi, State Minister of Economy, Trade and Industry, Japan, visited Abdalla Salem El-Badri, OPEC Secretary General.

May 11

Rajiva Misra, Indian Ambassador to Austria, visited Abdalla Salem El-Badri, OPEC Secretary General.

Shigeru Kimura, Special Advisor to Executive Director on Energy Affairs, Economic Research Institute for ASEAN (ERIA) and East Asia, visited Abdalla Salem El-Badri, OPEC Secretary General.

Students and professional groups wanting to know more about OPEC visit the Secretariat regularly, in order to receive briefings from the Public Relations and Information Department (PRID). PRID also visits schools under the Secretariat's outreach programme to give them presentations on the Organization and the oil industry. Here we feature some snapshots of such visits.

Visits

Students from the Leiden University, Mordenate College, Netherlands, visited the OPEC Secretariat on April 22, 2015.

Visitors of the Copenhagen Executives Forum, Copenhagen, Denmark, visited the OPEC Secretariat on April 28, 2015.

Visitors from the Management Development Institute in Gurgaon, India, and senior managers from the Indian Oil and Natural Gas Corporation (ONGC), visited the OPEC Secretariat on April 30, 2015.

Visitors from the Society of Petroleum Engineers Saudi Arabia Section, visited the OPEC Secretariat on May 4, 2015.

Students from the IFP School, France, visited the OPEC Secretariat on May 8, 2015.

Students from the Clarkson University's School of Business in Potsdam, NY, US, visited the OPEC Secretariat on May 18, 2015.

Outreach

Reaching out to make a difference

The OPEC Secretariat has been based in Vienna since 1965. Over the past 50 years, the Organization and its employees have contributed diligently to making a difference in local communities through a variety of programmes designed to raise awareness about the Organization, its educational outreach activities and its charitable initiatives. OPEC implements these efforts through its *Outreach Programme,* which is coordinated by the Public Relations and Information Department (PRID).

Helping support children in need

OPEC is a loyal supporter of the annual United Nations Women's Guild (UNWG) Charity Bazaar, an international fundraising event whose proceeds go to support charitable projects to assist children in need. The event is held annually at the Austria Centre in Vienna and features an international bazaar, as well as cultural and culinary specialties from all over the world. In recognition of OPEC's initiative and support over the years, the UNWG honoured the Organization with a certificate of appreciation.

Engaging Austria's future petroleum engineers

OPEC also makes special visits to local organizations and academic institutions as part of its outreach efforts.

A recent visit took the OPEC outreach team to Montan University in Leoben, Austria, which is considered one of the top ranking mining universities in Europe. The university has around 3,500 students and will celebrate its 175th anniversary in October 2015.

Representatives from PRID and the Research Division (RD) were received by the university's student chapter of the Society of Petroleum Engineers (SPE). After a warm welcome and introduction, the OPEC film entitled *'Instrument of Change'* was screened, shedding light on OPEC's historical developments to date. This was followed by two comprehensive presentations on the Organization's aims and objectives, structure and membership, in addition to detailed information about its important role in the international oil market.

An interactive question and answer session followed in which students inquired about the Organization's role in stabilizing the international oil market, the decision-making process, the work of the different departments within the Secretariat and a variety of other questions as well.

Members of the OPEC PR Team visited the Montan University Leoben, Austria, on March 11, 2015.

The OPEC stand at the 'Science and Engineering Fair' at the Vienna International School, with PRID staff members Hind Zaher and Nina Missethon.

More than 100 students attended the briefing, with the majority coming from the Petroleum Engineering Department.

OPEC's flagship publications such as the *World Oil Outlook (WOO), the Annual Statistical Bulletin (ASB) and the OPEC Bulletin* were distributed to the students, as well some organizational gifts.

OPEC extended a special invitation to the University, allowing it to nominate three students to attend the 6th OPEC International Seminar, with all costs covered by the Organization. The University expressed its appreciation for this special invitation and also its interest in visiting the OPEC Secretariat in Vienna.

Supporting future scientists and engineers

In recognition of the important role students and the younger generation play in the future of the oil industry, OPEC continues to support the annual 'Science and Engineering Fair'.

This year, the INNM Vienna International Science and Engineering (S&E) Fair for international middle and high schools students in Austria, Slovakia, the Czech Republic and Bulgaria took place on March 14, 2015, at the Vienna International School. The theme for the event was "International Pi Day: Celebrating the countless contributions of calculations!" The Fair was organized by the Vienna Chapter of Institute of Nuclear Materials Management (INMM) with the aim of promoting science and engineering subjects in schools and encouraging younger generations to pursue careers in science and engineering.

More than 130 students from 11 different international schools participated in two divisions, a junior division and a senior division, covering a variety of categories, including computer science and mathematics, life science and animals, earth and space science, environmental science, machines and technology, health science, physical principles as well as chemistry and physics.

In the morning, participating students presented their projects to volunteer science and engineering judges, explaining the methods they used and the outcomes of their research. The Fair was then opened to public viewing in the afternoon.

OPEC sponsors this event as a platinum exhibitor, displaying some of its most important publications and screening its films during the event. In an attempt to raise awareness and enhance knowledge about the Organization and the oil industry, a short quiz was also presented for students to complete. Students were able to view the films being screened and consult the various OPEC publications to answer the questions. OPEC's stand was well attended and visited by students, teachers, parents, judges and staff members from the International Atomic Energy Agency (IAEA), as well as from the OPEC Secretariat.

Many of the students took the opportunity to ask questions about the Organization's work. They also expressed their interest in knowing more about the industry and the functions of the OPEC Secretariat. The book *'I need to know'* was distributed among the students, who immediately started reading it and asking questions. An invitation was extended to all participating schools to visit the OPEC Secretariat in Vienna for a briefing.

On March 19, 2015, the S&E Fair held its awards banquet ceremony at the Vienna International School.

The names of the winning projects were announced, and winners received a certificate and several gift awards. OPEC also announced the results of the quiz, awarding special gifts to the top three winners and 20 corporate gifts to those who received the next highest ratings on their quiz results.

A certificate of appreciation was awarded to OPEC for contributing as a platinum-level exhibitor. The organizers expressed their gratitude to OPEC not only for sponsoring the event, but also for engaging the students in the Organization's aims and objectives, as well as the oil industry. Additionally, OPEC was commended for contributing to the success of the event and for supporting the advancement of the younger generations in the fields of science and engineering.

Vacancy announcement

Legal Advisor, International Matters

Within the Secretariat, the Legal Office contributes to the conduct of the affairs of the Organization by promoting the rule of law within the Organization and in its relation with governments, organizations, enterprises and individuals and by maintaining and defending the legal claims and interests of the Organization. The Office participates in the drafting and negotiations of contracts and agreements with external entities. It provides legal support and proposes amendments in respect of the Organization's organs, statutes and programs as well as of financial and staff regulations. It monitors developments of relevant legal aspects pertaining to the energy sector, nationally and internationally, conducts research and publishes up to date legal articles on recent and emergent trends. It protects and advances the interests of the Organization and its Member Countries in international forums.

Objective of position:

Under the overall supervision of the General Legal Counsel, the Legal Advisor, International Matters, provides legal advice to the Secretary General and to senior management regarding the Organization's relation with external entities. He/she addresses and defends international legal claims and interests of the Organization within the scope of its Statute and follows, analyses and advises on issues of national and international legal policies of relevance to OPEC and its Member Countries.

Main responsibilities:

- Identifies international legal issues of significance to OPEC, examines, studies and analyses these with a view to protecting and promoting the Organization's interests, goals and claims.
- Reports on emerging international legal issues of significance to OPEC, draws conclusions regarding possible implications for OPEC and its Member Countries and advises on appropriate responses.
- Conducts research into multilateral agreements relating to the WTO, global climate change, competition, energy and environment in collaboration with OPEC's Research Division.
- In close collaboration with the Environmental Matters Unit, monitors international legal developments at the multilateral level (ICN, WTO, UNCTAD, etc) and in international legal professional associations with a view to protecting and promoting the interest of the Organization.
- Examines, studies and analyses relevant national legal systems, policies and practices in the energy sector that may impact on OPEC.
- Provides legal advice and interpretation on legal aspects of the Organization's relations with other entities, including contractual relations, questions of liability, arbitration and claims against the Organization.
- Follows up relevant decisions of the Governing Bodies of the Organization, in particular regarding legal studies and other international legal issues of significance to OPEC.

Required competencies and qualifications:

- University degree in International Law (Masters).
- University degree: eight years with a minimum of three years at the international level.
- Advanced degree: six years with a minimum of three years at the international level.
- Training/specialization — a combination of two or more of the following specializations: Public International Law; Competition law and Policy; International Environmental Law and Policy; International Petroleum Law and Policy; Comparative Energy Law; The Institutional Law of International Organizations; International Law on Foreign Investments; and other relevant specializations in international law.
- Competencies: communication skills, analytical skills, presentation skills, interpersonal skills, customer service orientation, initiative and integrity.
- Language: English.

Status and benefits:

Members of the Secretariat are international employees whose responsibilities are not national but exclusively international. In carrying out their functions they have to demonstrate the personal qualities expected of international employees such as integrity, independence and impartiality.

The post is at grade E reporting to the General Legal Counsel. The compensation package, including expatriate benefits, is commensurate with the level of the post.

Applications:

Applicants must be nationals of Member Countries of OPEC and should not be older than 58 years.
Applicants are requested to fill in a résumé and an application form which can be received from their Country's Governor for OPEC.
In order for applications to be considered, they must reach the OPEC Secretariat through the relevant Governor not later than **June 12, 2015**, quoting the job code: 1.1.02 *(see www.opec.org — Employment)*.

Visit our website

www.opec.org

Forthcoming events

FLNG 2015, June 8–11, 2015, London, UK. Details: ICBI Customer Services, Maple House, 149 Tottenham Court Road, London W1T 7AD, UK. Tel: +44 207 017 72 00; fax: +44 207 017 78 07; e-mail: info@icbi.co.uk; website: www.icbi-events.com/event/flng-conference.

Price risk management in the oil industry, June 8–12, 2015, Cambridge, UK. Details: Energy Institute, 61 New Cavendish Street, London W1G 7AR, UK. Tel: +44 207 467 7116; fax: +44 207 580 2230; e-mail: jwarner@energyinst.org.uk; website: www.energyinst.org/_uploads/documents/1506pro.pdf.

SPE London annual conference – maximizing value in upstream oil and gas, June 9–10, 2015, London, UK. Details: Society of Petroleum Engineers, Part Third Floor East, Portland House, 4 Great Portland Street, London W1W 8QJ, UK. Tel: +44 207 299 3300; fax: +44 207 299 3309; e-mail: spelon@spe.org; website: www.spe.org/events/lond/2015.

POWER-GEN Europe, June 9–11, 2015, Amsterdam, Netherlands. Details: PennWell, 1421 S Sheridan Road, Tulsa, Oklahoma 74112, USA. Tel: +1 918 835 3161; fax: +1 918 831 9497; e-mail: sneighbors@pennwell.com; website: www.powergeneurope.com.

2nd Africa LPG trade summit, June 10–11, 2015, Durban, South Africa. Details: Centre for Management Technology, 80 Marine Parade Road #13-02, Parkway Parade, 449269 Singapore. Tel: +65 6345 7322/6346 9132; fax: +65 6345 5928; e-mail: cynthia@cmtsp.com.sg; website: www.cmtevents.com/aboutevent.aspx?ev=150625.

Green India energy summit 2015, June 10–12, 2015, Ahmedabad, India. Details: Business Excellence Summits (BE Summits Pvt Ltd), No 1, Second Floor, 1st Cross, 1st Main, Ashwini Layout, Off Koramangala Ring Road, Bangalore 560047, India. Tel: +91 80 4963 7000; e-mail: contactus@besummits.com.

LNG bunkering North America, June 15–17, 2015, Vancouver, Canada. Details: IQPC Ltd, Anchor House, 15–19 Britten Street, London SW3 3QL, UK. Tel: +44 207 368 9300; fax: +44 207 368 9301; e-mail: enquire@iqpc.co.uk; website: www.lngbunkeringnorthamerica.com.

Kazakhstan local content summit, June 16, 2015, Astana, Kazakhstan. Details: CWC Associates Ltd, Regent House, Oyster Wharf, 16–18 Lombard Road, London SW11 3RF, UK. Tel: +44 207 978 000; fax: +44 207 978 0099; e-mail: sshelton@thecwcgroup.com; website: www.kazakhstan-local-content.com.

World national oil companies congress 2015, June 16–17, 2015, London, UK. Details: Terrapinn Holdings Ltd, First Floor, Modular Place, Turnberry Office Park, 48 Grosvenor Road, Bryanston 2021, South Africa. Tel: +27 11 516 4000; fax: +27 11 463 6000; e-mail: enquiry.za@terrapinn.com; website: www.terrapinn.com/conference/world-national-oil-companies-congress.

Next generation inspection for oil and gas, June 16–18, 2015, London, UK. Details: IQPC Ltd, Anchor House, 15–19 Britten Street, London SW3 3QL, UK. Tel: +44 207 368 9300; fax: +44 207 368 9301; e-mail: enquire@iqpc.co.uk; website: www.nextgeninspection.com.

Gas storage and transmissions, June 17–18, 2015, London, UK. Details: SMi Group Ltd, Unit 122, Great Guildford Business Square, 30 Great Guildford Street, London SE1 OHS, UK. Tel: +44 207 827 6000; fax: +44 207 827 6001; e-mail: client_services@smi-online.co.uk; website: www.smi-online.co.uk/energy/uk/conference/gas-storage.

Enhanced oil recovery: technical and commercial perspectives, June 22, 2015, London, UK. Details: Energy Institute, 61 New Cavendish Street, London W1G 7AR, UK. Tel: +44 207 467 7116; fax: +44 207 580 2230; e-mail: jwarner@energyinst.org.uk; website: www.energyinst.org/_uploads/documents/1506oilrec.pdf.

World LNG series: small-mid scale LNG summit, June 23, 2015, Amsterdam, The Netherlands. Details: CWC Associates Ltd, Regent House, Oyster Wharf, 16–18 Lombard Road, London SW11 3RF, UK. Tel: +44 207 978 000; fax: +44 207 978 0099; e-mail: sshelton@thecwcgroup.com; website: http://small-mid-lng.com.

Wold shale oil and gas: Latin America summit, June 23, 2015, Neuqén, Argentina. Details: CWC Associates Ltd, Regent House, Oyster Wharf, 16–18 Lombard Road, London SW11 3RF, UK. Tel: +44 207 978 000; fax: +44 207 978 0099; e-mail: sshelton@thecwcgroup.com; website: http://latam.world-shale.com/en.

13th FLNG world congress, June 23–24, 2015, Singapore. Details: IQPC Ltd, Anchor House, 15–19 Britten Street, London SW3 3QL, UK. Tel: +44 207 368 9300; fax: +44 207 368 9301; e-mail: enquire@iqpc.co.uk; website: www.flngworldcongress.com.

Gas Africa conference and exhibition, June 23–24, 2015, Johannesburg, South Africa. Details: McNaughton & Associates; The Connection, 10 Wessels Road, Rivonia, 2128, Johannesburg, South Africa. Tel: +27 (0)11 234 1196; fax: +27 (0)11 234 1355; e-mail: bettemc@mcnaughtonevents.co.za; website: www.mcnaughtonevents.co.za/index.php/intro-gas-2015.

12th Russian petroleum and gas congress, June 23–25, 2015, Moscow, Russia. Details: ITE Group plc, Oil and Gas Division, 105 Salusbury Road, London NW6 6RG, UK. Tel: +44 207 596 5233; fax: +44 207 596 5106; e-mail: oilgas@ite-exhibitions.com; website: www.mioge.com/About/Overview.aspx.

Budgeting, planning and forecasting for the oil and gas industry, June 23–25, 2015, London, UK. Details: Energy Institute, 61 New Cavendish Street, London W1G 7AR, UK. Tel: +44 207 467 7116; fax: +44 207 580 2230; e-mail: jwarner@energyinst.org.uk; website: www.energyinst.org/_uploads/documents/1506plan.pdf.

13th biennial Moscow international oil and gas exhibition, June 23–26, 2015, Moscow, Russia. Details: ITE Group plc, Oil and Gas Division, 105 Salusbury Road, London NW6 6RG, UK. Tel: +44 207 596 5233; fax: +44 207 596 5106; e-mail: oilgas@ite-exhibitions.com; website: website: www.mioge.com/About/Overview.aspx.

Brazil offshore conference, June 23–26, 2015, Macaé, Brazil. Details: Society of Petroleum Engineers, Part Third Floor East, Portland House, 4 Great Portland Street, London W1W 8QJ, UK. Tel: +44 207 299 3300; fax: +44 207 299 3309; e-mail: spelon@spe.org; website: www.brasiloffshore.com/en/Home.

Operational excellence in oil and gas, June 30–July 1, 2015, London, UK. Details: IQPC Ltd, Anchor House, 15–19 Britten Street, London SW3 3QL, UK. Tel: +44 207 368 9300; fax: +44 207 368 9301; e-mail: enquire@iqpc.co.uk; website: www.opexinoilandgaseurope.com.

After slow start, potential for global economy holds promise

***May* 2015**

Despite the slow start to the year in some countries, world economic growth could strengthen further as 2015 progresses, according to the OPEC Secretariat in Vienna.

Its *Monthly Oil Market Report (MOMR)* for May said that such a development would lead to an improvement in crude oil demand in the year.

A feature article in the publication on the potential for the world economy in 2015 said continued healthy middle distillate demand, along with expectations of improving gasoline consumption in the run-up to the driving season in the United States, should support economic growth and strengthen oil demand in the coming months.

It said that in the emerging markets, despite recent data, China was expected to manage its forecast gross domestic product (GDP) growth of around seven per cent for 2015 – with the Secretariat's figure currently at 6.9 per cent – given recent monetary stimulus, such as the decrease in the required reserve ratio for banks, as well as interest rates.

The GDP for Brazil and Russia was forecast to contract by 0.4 per cent and 3.2 per cent, respectively, in 2015.

The *MOMR* observed that despite the recent currency appreciation in Brazil, the overall downward trend of the real, along with lack of investment and slowing household consumption, may further increase its GDP contraction in the second half of 2015.

In Russia, it said, despite the recent appreciation of the rouble, high inflation and ongoing geopolitical concerns may continue to weigh on economic growth.

"At the same time, some countries in the Euro-zone, Africa and Other Asia, as well as India and even Japan later on in the year, have the potential to further support economic growth in 2015," it maintained.

The publication stated that recent data from various economies had shown that the first quarter of 2015 did not turn out to be as promising as initially forecast.

Some projections had been revised down, leading to adjustments to the short-term outlook for countries that had been expected to contribute to the improvement in overall global growth.

In the OECD countries, it said, the US – as in the previous year – had seen unexpectedly lower growth in the first quarter, which was now seen growing by only 0.2 per cent.

"If the latest information regarding the increase in the trade deficit – released after the first quarter GDP growth – is taken into consideration, growth in the first quarter is likely to be revised even lower," it said.

The *MOMR* said a closer look at the details showed that the key factors behind lower first quarter growth were cold weather, the West Coast port strike, and the strong appreciation of the US dollar. In addition, the decrease in investments also contributed to the lower GDP growth.

US GDP growth for 2015 was now forecast at 2.6 per cent, having previously stood at 2.9 per cent.

The *MOMR* said that despite the falling unemployment rate, the labour market – in particular wages – had shown some weakness in the first quarter.

Potentially slower-than-expected growth in 2015 was likely to delay any interest rate hike by the US Federal Reserve, at least until the end of the third quarter of this year. This could support the economy to partially compensate for some of the slow-down in first quarter.

"Moreover, some of the factors hindering growth in the first quarter could turn out to be short lived, leading to higher-than-expected growth for the rest of the year," the report added.

MOMR oil market highlights ...

May 2015

The **OPEC Reference Basket** rose in April to its highest value this year supported by various bullish factors. The Basket increased by $4.84 to $57.30/b, although remained considerably lower year-on-year. The ICE Brent contract rose by $4.20 to $61.14/b and Nymex WTI jumped by $6.77 to $54.63/b.

World economic growth for 2015 has been revised down to 3.3 per cent from 3.4 per cent previously, in line with last year's growth. This is mainly due to the United States, where growth has been revised to 2.6 per cent from 2.9 per cent, following sluggish growth in the first quarter. The Euro-zone and Japan remain unchanged at 1.3 per cent and 0.8 per cent, respectively. In the emerging markets, China has been revised down to 6.9 per cent from 7.0 per cent and Brazil to -0.4 per cent from 0.2 per cent. Russia and India remain unchanged at -3.2 per cent and 7.5 per cent, respectively.

World oil demand in 2015 is now projected to rise at a slightly higher 1.18 million barrels/day, compared to growth of 960,000 b/d in the previous year. The slight upward revision to the 2015 growth figure mainly reflects expectations of an uptick in oil requirements in OECD America.

Non-OPEC oil supply growth in 2015 is expected to grow by 680,000 b/d, compared to an increase of 2.17m b/d in the previous year. Output of OPEC NGLs is expected to grow by 190,000 b/d in 2015, following growth of 180,000 b/d last year. In April, OPEC crude oil production increased by a marginal 18,000 b/d to average 30.84m b/d, according to secondary sources.

Product markets in the Atlantic Basin were mixed in April. Strong gasoline demand ahead of the US driving season lent support to crack spreads at the top of the barrel. However, middle distillates were pressured by higher refinery runs on the US Gulf Coast amid increasing inflows from Europe. In Asia, margins fell due to weakening market fundamentals across the barrel, as increasing supplies outweighed strong regional demand.

Dirty vessel spot **freight rates** dropped month-on-month as a result of limited tonnage demand mainly in the Suezmax and Aframax markets, while VLCC rates rose by 17 per cent compared to the previous month. OPEC and global spot fixtures declined by 4.2 per cent and 2.9 per cent, respectively, on the back of lower fixtures for eastern and western destinations. In April, OPEC spot fixtures averaged 11.13m b/d and OPEC sailings averaged 23.35m b/d.

OECD commercial oil stocks rose by 16.0m b in March to stand at 2,745m b. At this level, inventories were 98m b higher than the five-year average. Crude saw a surplus of 99m b, while product stocks remained almost in line with the five-year average. In terms of days of forward cover, OECD commercial stocks stood at 61.0 days, 2.8 days higher than the five-year average.

Demand for OPEC crude in 2015 is expected at 29.3m b/d. This follows a slight upward adjustment from the previous month and represents a gain of 300,000 b/d over the estimate for 2014 of 29.0m b/d.

The feature article and oil market highlights are taken from OPEC's Monthly Oil Market Report (MOMR) for May 2015. Published by the Secretariat's Petroleum Studies Department, the publication may be downloaded in PDF format from our Website (www.opec.org), provided OPEC is credited as the source for any usage. The additional graphs and tables on the following pages reflect the latest data on OPEC Reference Basket and crude and oil product prices in general.

Table 1: OPEC Reference Basket crude oil prices

$/b

Crude/Member Country	2014 Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2015 Jan	Feb	Mar	Apr	Weeks 14–18/2015 (week ending) Apr 3	Apr 10	Apr 17	Apr 24	May 1
Arab Light – Saudi Arabia	104.87	105.80	108.61	107.15	102.24	97.23	85.93	76.07	60.13	44.47	53.78	52.20	57.73	52.19	54.34	57.87	59.71	61.84
Basrah Light – Iraq	102.11	103.16	105.80	103.83	99.20	94.49	83.57	73.94	57.94	42.58	51.82	50.53	55.61	50.26	52.28	55.69	57.57	59.67
Bonny Light – Nigeria	110.19	112.22	114.36	109.19	102.26	98.07	88.51	80.10	63.81	48.51	58.46	56.75	60.65	55.51	57.41	60.30	62.83	64.85
Es Sider – Libya	107.39	109.42	111.31	106.19	100.56	96.20	86.31	78.90	61.53	46.76	56.83	54.78	58.40	53.40	55.16	58.05	60.58	62.63
Girassol – Angola	108.80	110.21	111.23	107.02	101.52	97.15	86.78	78.68	61.83	47.98	58.27	56.86	61.12	55.78	57.35	60.97	63.64	65.47
Iran Heavy – IR Iran	104.32	105.40	107.45	106.21	101.42	96.14	84.61	74.46	58.99	42.84	53.26	51.27	56.26	50.88	52.85	56.46	58.27	60.20
Kuwait Export – Kuwait	103.13	104.21	106.56	105.50	100.57	95.30	83.99	74.04	58.25	42.31	52.25	50.52	55.96	50.48	52.59	56.16	57.90	59.97
Marine – Qatar	104.53	105.44	107.85	105.96	101.52	96.08	86.14	75.43	59.48	45.51	55.38	54.27	58.51	53.24	55.14	58.77	60.48	62.56
Merey* – Venezuela	93.99	96.06	98.71	95.06	92.31	88.61	76.17	68.42	51.17	37.96	48.41	45.79	49.49	44.99	46.54	49.82	51.09	53.18
Murban – UAE	107.75	108.35	110.74	108.87	104.33	98.93	89.10	77.85	62.27	48.41	58.56	57.41	61.66	56.42	58.17	62.05	63.66	65.69
Oriente – Ecuador	94.73	95.47	98.75	95.21	89.53	87.20	76.84	69.52	53.86	42.26	47.00	45.79	52.73	45.96	48.48	53.47	55.09	57.49
Saharan Blend – Algeria	108.09	110.36	112.66	106.74	100.86	97.10	87.61	79.60	62.93	47.91	58.18	56.93	59.75	55.15	56.51	59.40	61.93	63.89
OPEC Reference Basket	**104.27**	**105.44**	**107.89**	**105.61**	**100.75**	**95.98**	**85.06**	**75.57**	**59.46**	**44.38**	**54.06**	**52.46**	**57.30**	**51.98**	**53.93**	**57.44**	**59.30**	**61.37**

Table 2: Selected OPEC and non-OPEC spot crude oil prices

$/b

Crude/Member Country	2014 Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2015 Jan	Feb	Mar	Apr	Weeks 14–18/2015 (week ending) Apr 3	Apr 10	Apr 17	Apr 24	May 1
Minas – Indonesia[1]	111.12	107.22	112.13	105.06	99.94	95.07	84.46	75.92	59.95	46.37	55.90	54.11	58.55	52.77	54.30	59.01	61.17	62.99
Arab Heavy – Saudi Arabia	101.61	102.72	104.50	103.69	99.14	93.73	82.45	72.18	56.65	40.25	51.07	49.34	54.26	48.97	50.88	54.53	56.21	58.13
Brega – Libya	107.99	110.02	112.01	105.34	100.21	96.05	86.26	79.10	62.43	47.71	57.73	55.68	59.20	54.25	55.96	58.85	61.38	63.43
Brent – North Sea	107.69	109.67	111.66	106.64	101.56	97.30	87.41	78.90	62.53	47.86	58.13	55.93	59.50	54.53	56.26	59.15	61.68	63.73
Dubai – UAE	104.68	105.55	108.03	106.13	101.73	96.47	86.73	76.33	60.25	45.57	55.85	54.66	58.55	53.72	55.13	58.83	60.53	62.43
Ekofisk – North Sea	108.65	110.86	112.67	107.33	102.04	97.75	87.87	79.27	63.15	48.48	59.22	57.18	60.51	55.30	57.49	59.88	62.43	64.48
Iran Light – IR Iran	106.03	107.42	110.27	105.73	101.30	96.41	84.90	76.88	61.32	47.42	55.97	54.79	59.34	53.60	55.86	58.96	61.44	63.52
Isthmus – Mexico	101.29	102.59	106.47	102.20	96.78	93.70	85.40	79.04	59.74	45.52	52.68	51.41	59.10	52.94	56.45	59.23	60.49	63.06
Oman – Oman	104.93	105.71	108.06	106.15	102.15	97.18	86.77	77.81	61.16	46.61	56.58	55.12	58.66	54.11	55.32	58.92	60.59	62.45
Suez Mix – Egypt	104.12	105.14	106.81	103.41	99.34	93.48	83.91	75.58	58.72	44.07	54.70	52.05	57.07	51.07	53.66	56.06	59.61	61.36
Urals – Russia	106.91	107.84	109.44	106.23	101.98	96.13	86.63	78.92	61.53	47.03	57.81	55.07	59.70	53.98	56.00	59.00	62.53	64.32
WTI – North America	102.02	102.03	105.24	102.87	96.38	93.36	84.43	76.04	59.50	47.29	50.76	47.77	54.43	48.86	51.84	54.68	55.86	58.25

Note: As per the decision of the 109th ECB (held in February 2008), the OPEC Reference Basket (ORB) has been recalculated including the Ecuadorian crude Oriente retroactive as of October 19, 2007. As per the decision of the 108th ECB, the ORB has been recalculated including the Angolan crude Girassol, retroactive January 2007. As of January 2006, monthly averages are based on daily quotations (as approved by the 105th Meeting of the Economic Commission Board). As of June 16, 2005 (ie 3W June), the ORB has been calculated according to the new methodology as agreed by the 136th (Extraordinary) Meeting of the Conference. As of January 2009, the ORB excludes Minas (Indonesia).

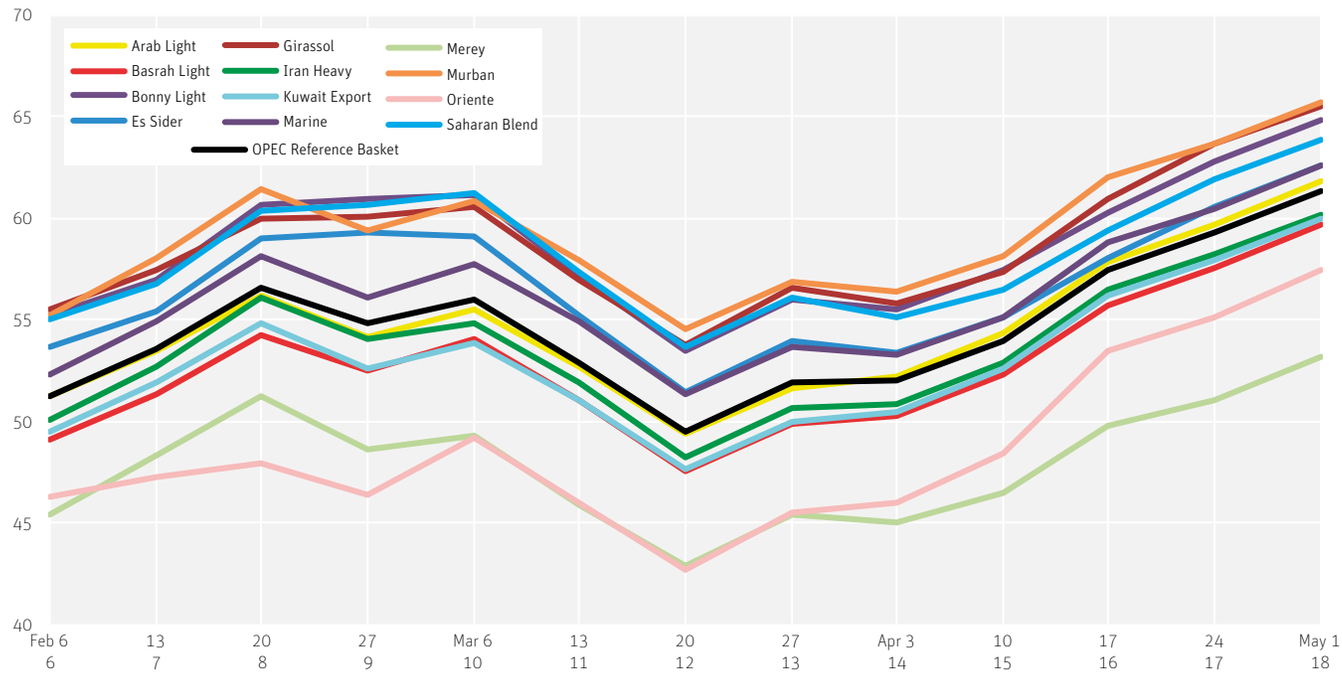
* *Upon the request of Venezuela, and as per the approval of the 111th ECB, BCF-17 has been replaced by Merey as of January 2009. The ORB has been revised as of this date.*

1. *Indonesia suspended its OPEC Membership on December 31, 2008.*

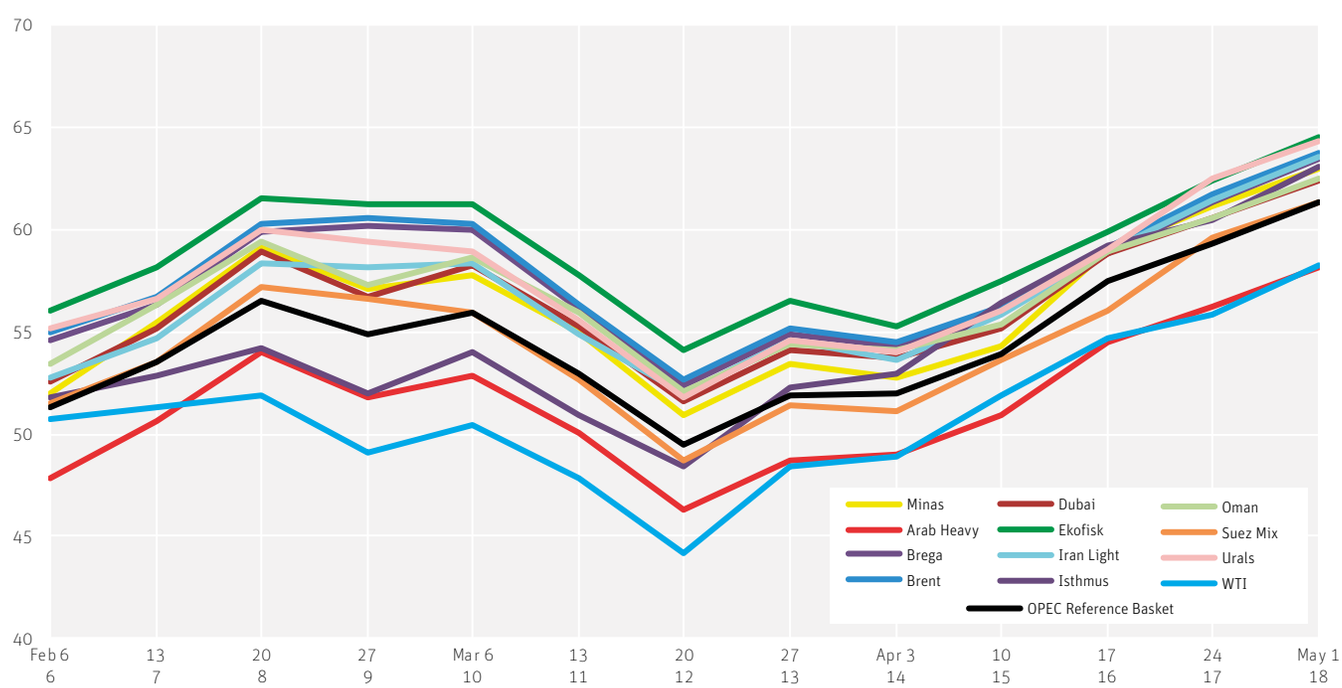
Brent for dated cargoes; Urals cif Mediterranean. All others fob loading port.

Sources: The netback values for TJL price calculations are taken from RVM; Platt's; Secretariat's assessments.

Graph 1: Evolution of the OPEC Reference Basket crudes, 2015 $/b



Graph 2: Evolution of spot prices for selected non-OPEC crudes, 2015 $/b



Note: As per the decision of the 109th ECB (held in February 2008), the OPEC Reference Basket (ORB) has been recalculated including the Ecuadorian crude Oriente retroactive as of October 19, 2007. As per the decision of the 108th ECB, the basket has been recalculated including the Angolan crude Girassol, retroactive January 2007. As of January 2006, monthly averages are based on daily quotations (as approved by the 105th Meeting of the Economic Commission Board). As of June 16, 2005 (ie 3W June), the ORB has been calculated according to the new methodology as agreed by the 136th (Extraordinary) Meeting of the Conference. As of January 2009, the ORB excludes Minas (Indonesia).
Upon the request of Venezuela, and as per the approval of the 111th ECB, BCF-17 has been replaced by Merey as of January 2009. The ORB has been revised as of this date.

Table and Graph 3: North European market — spot barges, fob Rotterdam

$/b

		naphtha	regular gasoline unleaded	diesel ultra light	jet kero	fuel oil 1 per cent S	fuel oil 3.5 per cent S
2014	April	102.40	128.03	122.13	122.24	98.07	91.32
	May	103.76	127.36	121.29	123.29	98.66	91.19
	June	105.38	130.41	121.59	124.73	98.71	93.20
	July	103.50	128.08	119.20	122.77	93.75	90.81
	August	95.76	119.86	116.65	120.02	88.64	89.16
	September	93.04	117.23	111.88	114.54	86.50	86.14
	October	78.61	103.90	102.35	105.32	76.50	75.06
	November	69.44	95.79	96.25	98.35	65.55	65.66
	December	54.22	73.31	77.45	81.09	49.59	49.44
2015	January	43.66	61.80	63.24	66.67	37.20	37.79
	February	55.35	73.71	75.02	75.70	47.05	47.79
	March	55.65	77.62	71.77	71.93	45.35	46.07
	April	57.96	82.31	74.21	73.97	49.20	49.07

Note: Prices of premium gasoline and diesel from January 1, 2008, are with 10 ppm sulphur content.

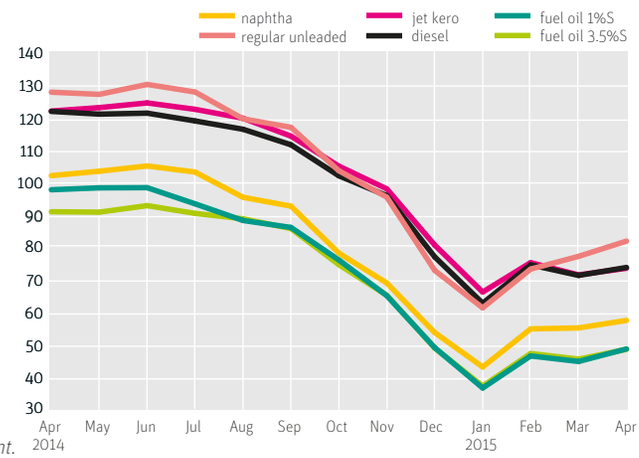


Table and Graph 4: South European market — spot cargoes, fob Italy

$/b

		naphtha	premium gasoline 50ppm	diesel ultra light	fuel oil 1 per cent S	fuel oil 3.5 per cent S
2014	April	100.23	122.87	122.04	98.72	90.17
	May	101.83	121.92	122.22	99.73	91.55
	June	103.30	126.37	122.79	100.17	92.20
	July	101.50	122.91	119.77	94.49	91.00
	August	93.81	115.19	117.07	89.68	88.87
	September	90.97	113.54	112.15	88.60	85.92
	October	75.96	99.57	101.58	76.56	75.70
	November	66.15	91.37	95.41	66.33	65.65
	December	50.28	68.70	77.48	50.62	48.88
2015	January	39.92	56.54	64.39	39.43	38.01
	February	52.53	68.31	76.34	49.07	46.78
	March	52.55	73.37	73.42	47.87	46.03
	April	54.42	78.27	75.84	51.02	49.58

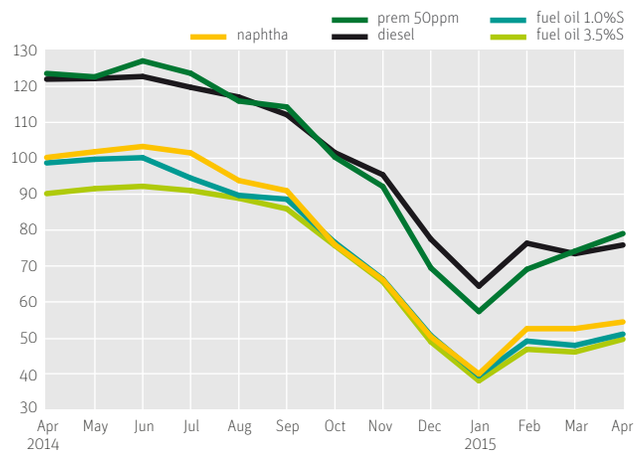


Table and Graph 5: US East Coast market — spot cargoes, New York

$/b, duties and fees included

		regular gasoline unleaded 87	gasoil	jet kero	fuel oil 0.3 per cent S	fuel oil 2.2 per cent S
2014	April	122.60	120.79	122.17	112.75	92.74
	May	120.49	119.69	121.43	107.82	93.37
	June	121.86	120.46	122.17	106.62	95.50
	July	118.21	116.19	120.48	109.23	92.39
	August	114.09	115.18	123.25	102.58	88.74
	September	113.53	110.29	117.10	99.44	87.09
	October	100.85	101.51	104.76	89.41	75.28
	November	91.42	94.39	103.46	83.40	65.14
	December	71.13	77.33	84.20	69.84	50.19
2015	January	57.53	67.44	67.31	57.16	40.53
	February	67.86	78.24	76.87	66.91	50.72
	March	69.59	67.93	72.37	60.93	46.49
	April	75.99	*na*	*na*	61.66	49.26

na Not available.

Source: Platts. Prices are average of available days.

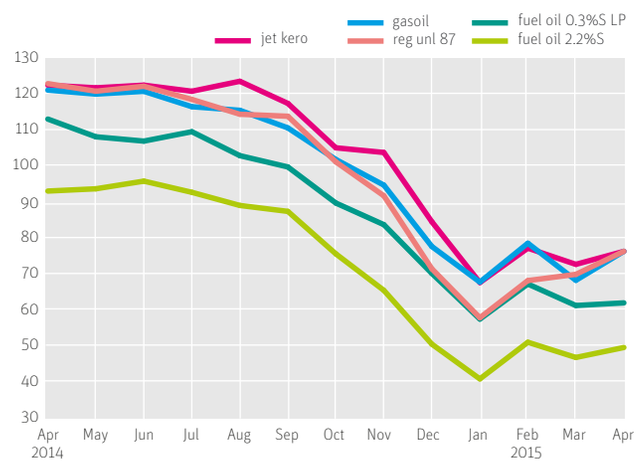


Table and Graph 6: Caribbean market – spot cargoes, fob

$/b

		naphtha	gasoil	jet kero	fuel oil 2 per cent S	fuel oil 2.8 per cent S
2014	April	110.21	122.28	122.90	92.15	87.15
	May	110.66	121.27	122.01	91.09	86.09
	June	113.92	122.06	122.73	92.18	87.18
	July	109.39	118.78	120.25	87.70	82.70
	August	103.46	117.51	121.28	86.93	81.93
	September	99.20	112.29	116.34	84.72	79.72
	October	83.11	103.03	105.12	71.56	66.56
	November	74.99	94.66	98.86	62.68	57.68
	December	53.81	73.84	77.19	47.07	42.07
2015	January	53.64	65.95	64.93	36.49	31.49
	February	64.50	74.64	74.74	47.16	42.16
	March	63.59	69.96	70.21	44.71	39.71
	April	64.91	73.27	73.41	47.16	42.16

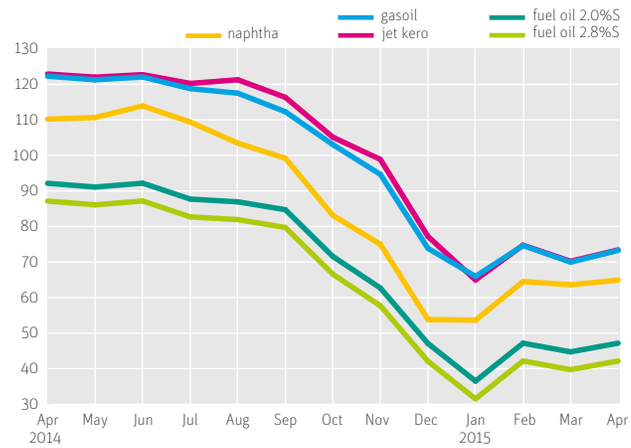


Table and Graph 7: Singapore market – spot cargoes, fob

$/b

		naphtha	premium gasoline unl 95	premium gasoline unl 92	gasoil	jet kero	fuel oil 180 Cst	fuel oil 380 Cst
2014	April	103.99	121.39	117.64	122.90	120.56	93.81	91.76
	May	105.31	121.43	117.96	122.35	119.88	95.08	92.86
	June	106.17	123.74	120.46	121.24	120.80	97.24	95.13
	July	106.34	121.99	119.78	118.96	118.79	94.51	93.35
	August	98.87	111.35	109.26	116.74	116.60	93.50	91.86
	September	94.45	110.58	108.61	111.95	112.48	90.86	89.14
	October	79.79	101.17	98.19	100.22	101.56	79.24	77.41
	November	71.86	90.44	87.94	93.85	96.41	71.68	70.38
	December	56.33	71.91	69.58	77.10	78.36	55.52	54.60
2015	January	45.23	57.42	54.66	62.67	63.66	43.99	42.59
	February	57.39	70.46	67.06	71.14	73.25	54.93	52.24
	March	57.38	73.84	70.34	70.75	70.01	51.54	49.42
	April	59.56	75.55	73.07	72.37	72.08	54.82	52.45

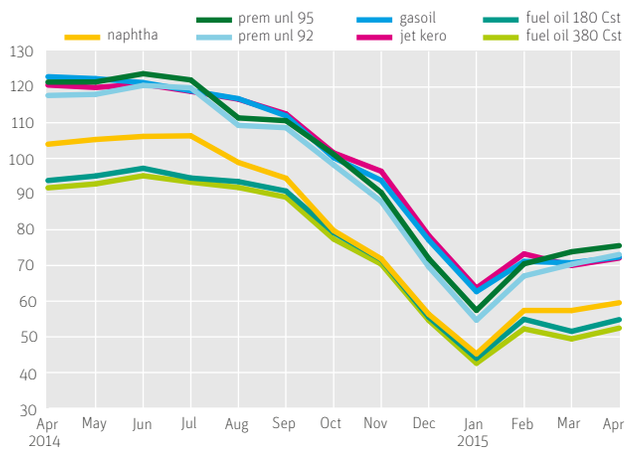
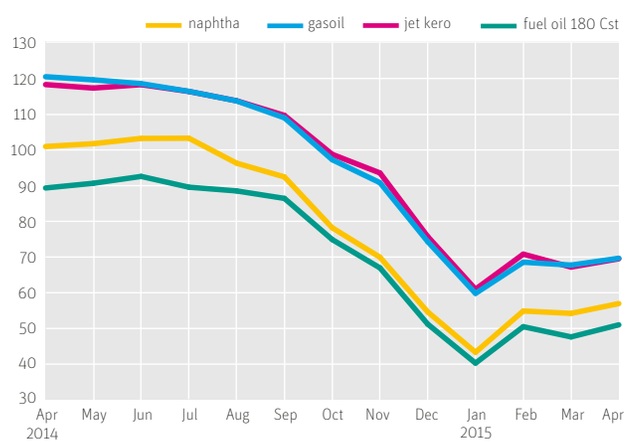


Table and Graph 8: Middle East Gulf market – spot cargoes, fob

$/b

		naphtha	gasoil	jet kero	fuel oil 180 Cst
2014	April	100.96	120.50	118.30	89.34
	May	101.74	119.63	117.32	90.66
	June	103.22	118.56	118.28	92.58
	July	103.28	116.40	116.37	89.56
	August	96.28	113.73	113.76	88.51
	September	92.44	108.99	109.68	86.42
	October	78.20	97.26	98.76	74.90
	November	69.94	90.82	93.55	66.95
	December	54.62	74.32	75.73	51.21
2015	January	43.32	59.82	60.98	40.28
	February	54.88	68.55	70.81	50.49
	March	54.22	67.74	67.18	47.63
	April	56.96	69.66	69.51	51.01

Source: Platts. Prices are average of available days.



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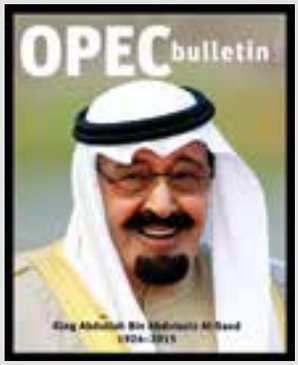

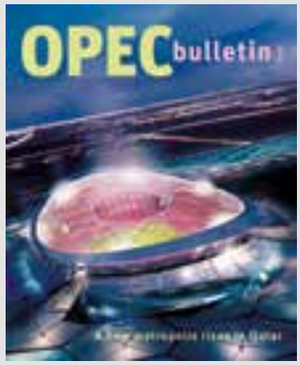

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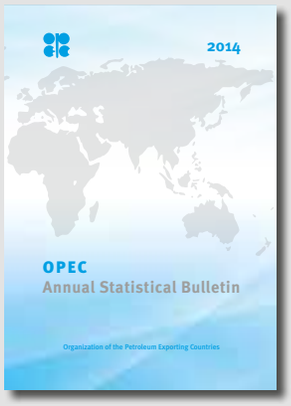

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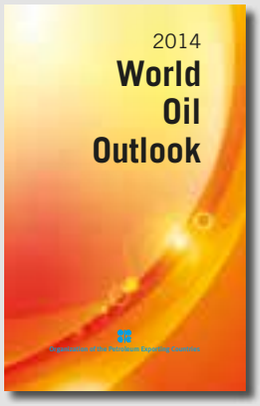

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