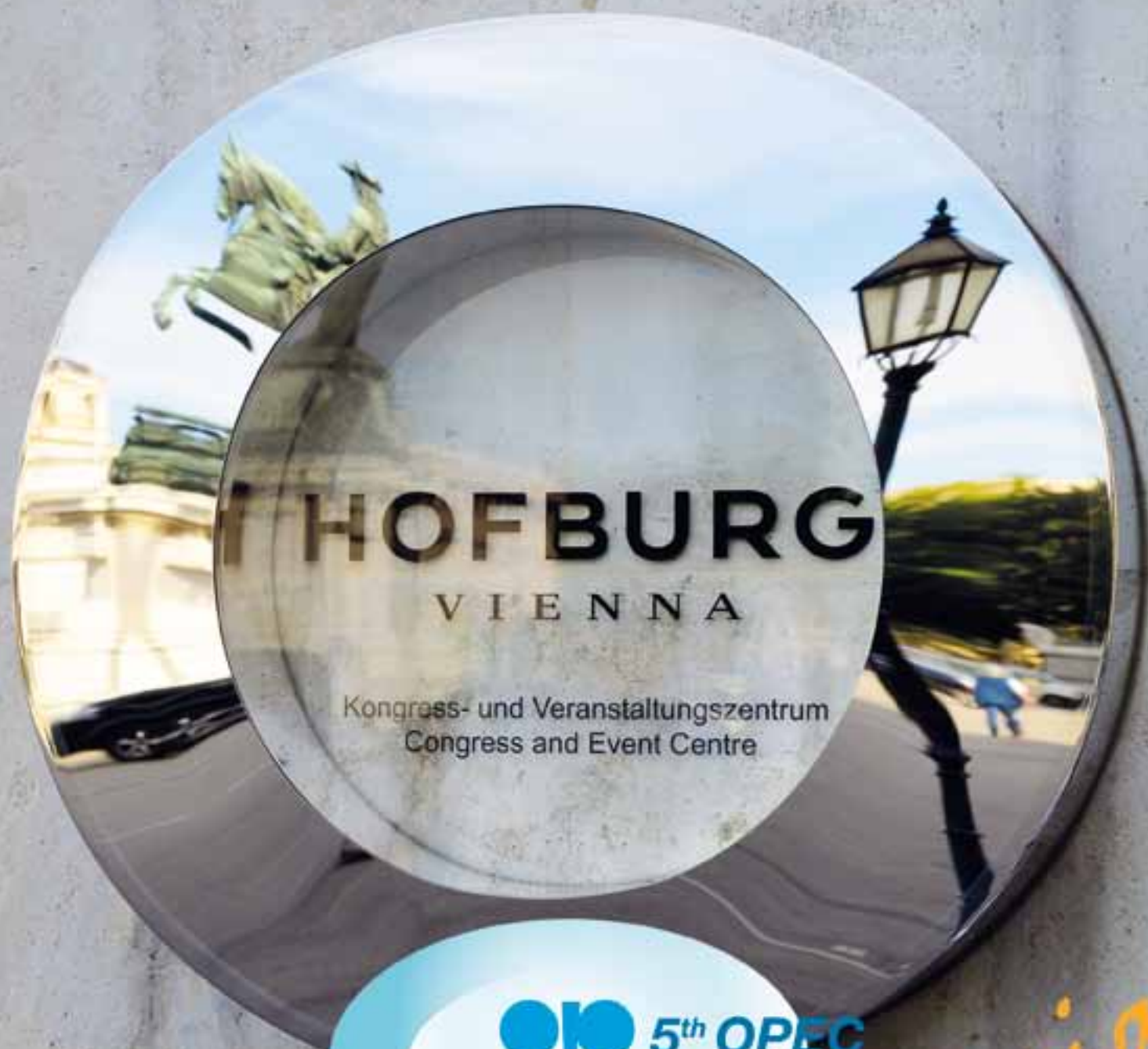


OPEC bulletin

6-7/12



5th OPEC

International Seminar

**161st Meeting
of the Conference**

Special

Understanding today's energy challenges a little better

The 5th OPEC International Seminar reminded us once again how vast, complex and diverse are the issues facing the oil industry today.

One only has to look at the topics discussed in Vienna's Hofburg Palace on June 13–14 to see this: the global energy scene, petroleum upstream and downstream, the oil market, the world economy, financial institutions, transportation, capacity expansion, investment, national and international oil companies, technology, the environment, sustainable development, energy poverty and so on, and the array of speakers, including the Federal President, Republic of Austria, Dr Heinz Fischer, who gave a presidential address, to appreciate the diversity of the participants.

The speakers' backgrounds reflected this diversity, as they sought to simplify the complexities for the 700-strong audience. Coming from more than 25 different countries, they represented governments, intergovernmental organizations, industry, commerce and academia at the highest levels.

This is what it involves these days to get oil to the consumer!

Nothing can be viewed in isolation in today's high-tech, globalized world.

Oil supply is now part of a vast global economic matrix that must accommodate, at the same time, challenges of a political, social and humanitarian nature. And this is not to forget the time-dimension, and the delicate task of balancing today's needs with those of tomorrow and, indeed, decades into the future.

Interdependence is the watchword here, and dialogue and cooperation are its companions. Thankfully, much progress has been made with dialogue and cooperation over the past two decades, with clear benefits for the industry and the world economy at large. OPEC has actively encouraged this, whether it has been through multilateral institutions like the International Energy Forum, bilateral processes, such as our Energy Dialogue with the European Union, or other more singular arrangements.

Seminars, workshops and similar gatherings also

provide important opportunities for dialogue, and the 5th OPEC International Seminar in Vienna was no exception.

As President Fischer noted in his opening message: "The convening of important meetings of top international decision-makers and experts in our city, in discussing the energy-related challenges in today's world, are highly beneficial to Vienna's role as a centre of dialogue ... I very much value the efforts the Organization of the Petroleum Exporting Countries (OPEC) makes to extend dialogue and cooperation on energy issues."

The Seminar presented a prime platform — and a gratefully exploited one — for informative, insightful exchanges among the gathered decision-makers and experts on the many pressing topical issues set before them. Moreover, the tacit recognition of the way these diverse issues interlinked with each other in the broader global context lent a vital backdrop to the proceedings.

The result was a perceptible enhancement of understanding about the state of the oil industry and, in particular, the market today, as well as the challenges that will face all of us in the future. Details of the proceedings can be found in the exclusive feature on the Seminar in this issue of the *OPEC Bulletin* (see p16).

On top of this, the delegates were able to intermingle during the breaks, establishing and reinforcing contacts among themselves, which again bodes well for the future of the industry.

This leads to one other key point from the event.

The 5th OPEC International Seminar did not end when the formal proceedings finished early on Thursday afternoon, June 14, 2012. In a sense, it was only just beginning. As was noted in the closing remarks, it was now up to all those present in the conference hall to think carefully about what they had heard over the previous day-and-a-half, as they returned to their places of work. If this, with the passage of time, helped the industry perform a little better than it would otherwise have done, then the Seminar could be adjudged a big success.



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OPEC Seminar 16



**5th OPEC
International Seminar**

13–14 June 2012, Vienna, Austria



Cover

This month's cover depicts the Hofburg Palace, venue of the 5th OPEC International Seminar (see pp16–119).

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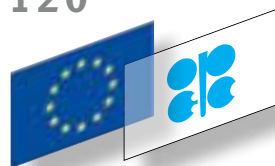
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Hard copy subscription: \$70/year

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 fair and stable prices for petroleum producers; an efficient, economic and regular supply of petroleum to consuming nations; and a fair return on capital to those investing in the industry. The Organization comprises 12 Members: Qatar joined in 1961; SP Libyan AJ (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

The OPEC Bulletin welcomes original contributions on
the technical, financial and environmental aspects
of all stages of the energy industry, research reports
and project descriptions with supporting illustrations
and photographs.

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Indexed and abstracted in PAIS International

Printed in Austria by Ueberreuter Print GmbH

Oil forecasting likely to remain “very challenging” in 2013

Organization of the Petroleum Exporting Countries Monthly Oil Market Report

June 2012

Feature Article:

Oil market challenges in the second half of 2012

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July 2012

Feature Article:
Oil market prospects for 2013

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Forecasting oil market developments will likely remain very challenging in 2013 with so much uncertainty surrounding the global economy and future oil demand levels.

That was the view of the OPEC Secretariat in its *Monthly Oil Market Report (MOMR)* for July.

It noted in a feature article that the oil market so far in 2012 had been strongly impacted by great uncertainty in the global economy, particularly from the OECD countries, resulting in frequent revisions in world economic growth and consequently global oil demand.

“These factors are likely to continue into next year, making forecasting oil market developments very challenging,” it stated.

The report observed that the world economy was continuing its subdued recovery and prospects remained fragile.

In the OECD, the real economy still lacked momentum, while growth levels in the emerging economies remained largely dependent on exports, the article observed.

“In the coming year, the world economy is likely to face continuing challenges from Europe’s sovereign debt burden and its weak banking system.

“The deceleration in the emerging economies and the recent easing in the United States recovery, due to persistently high unemployment, are also expected to dampen growth to some degree.”

The *MOMR* noted that this had led to a world economic growth forecast of 3.2 per cent in 2013, slightly lower than the estimate of 3.3 per cent for the current year.

The OECD region was forecast to continue to see slow growth in 2013 at 1.4 per cent,

the same level as in 2012. This represented only 0.7 per cent of the global economic growth forecast.

In contrast, the non-OECD economies would provide the majority of growth at 2.5 per cent, with China forecast at 8.0 per cent and India at 6.6 per cent.

“However, the dependency of emerging economies on exports to the OECD countries, combined with potentially inflated core asset markets — such as in housing — and a still relatively low domestic consumption base represent downward risks to the forecast for GDP growth,” the report warned.

It maintained that further stimulus by the BRIC (Brazil, Russia, India and China) economies may be limited in size and impact, despite existing flexibility in their financial resources.

“The economic situation in the Middle East and North Africa (MENA) region is also expected to decelerate. While economic growth this year is expected at 3.5 per cent, in the coming year, growth in the MENA region is forecast to ease to 3.0 per cent.”

The *MOMR* said world oil demand was forecast to continue growing by 800,000 b/d in 2013 to average 89.5 million barrels/day, representing a decline of 100,000 b/d from the growth estimate for the current year.

The slowdown, it contended, was expected not only in the OECD region, which was projected to see a further contraction of 200,000 b/d, but also in the non-OECD area, where growth was forecast at around 1.0m b/d.

“As in 2012, industrial and petrochemical consumption are expected to be the main drivers of oil demand next year. In terms of products, diesel and naphtha are

foreseen showing the most growth in 2013,” the report forecast.

It said the bulk of gasoline demand was expected to come from growing transportation consumption in non-OECD countries, with some contribution from the OECD regions of North America and the Pacific.

US gasoline demand was expected to see a slight improvement next year; however, the forecast could be negatively affected by the pace of the country’s economic recovery.

The *MOMR* indicated that non-OPEC oil supply in 2013 was forecast to increase by 900,000 b/d to average 54.0m b/d. This compared with estimated growth of 700,000 b/d this year.

On a regional basis, it added, North American supply was expected to experience the highest growth, supported by an expected healthy addition of tight oil from shale developments in the US and Canada, followed by Latin America and the Former Soviet Union (FSU). OECD Europe was projected to see the only decline in 2013.

The OPEC report said the non-OPEC supply forecast for 2013 incorporated considerable risks, with factors such as natural decline rates across various regions and progress in new supply developments, as well as environmental issues, production costs and oil price levels.

“Moreover, continued geopolitical concerns and security challenges remain major risk factors for some producing countries in 2013. OPEC natural gas liquids (NGLs) and non-conventional oils are expected to increase by 200,000 b/d to average 5.9m b/d for the year.”

The report said that, based on the above forecasts,

the projected growth in oil demand in 2013 would largely be met by incremental non-OPEC supply, indicating a comfortable market situation next year.

As a result, demand for OPEC crude in 2013 was forecast to average 29.6m b/d, representing a decline of around 300,000 b/d from 2012.

“The current high level of stocks in the OECD region, combined with rising inventories in the non-OECD, should also provide an additional cushion in the market.

“At the same time, the considerable uncertainties impacting the forecast highlight the need for continued close monitoring of oil market developments in the coming months,” the *MOMR* maintained.

Meanwhile, the OPEC Secretariat detailed the problems facing the international oil industry in the second half of 2012 in its June *MOMR*.

It warned then that signs appeared to be showing that the global economy was slowing further.

“From the Euro-zone crisis to a notable deceleration in the developing and emerging economies, the current challenges are manifold,” it noted.

It said that despite having lost some steam recently, the US economy seemed to be more resilient than the other developed economies. However, towards the end of the year, fiscal challenges were expected to re-emerge, as sovereign debt levels remained elevated.

“Japan is also expected to continue its recovery from last year’s low growth, but its current expansion remains fragile and highly dependent on stimulus and exports,” the June *MOMR* said.

It pointed out that the major weakening factor for the

world economy, however, was still the Euro-zone, where many issues, ranging from the public debt situation in Greece, to the ailing banking sector in Spain, remained unsolved.

“The weakness in the OECD economies is having a global impact, particularly on emerging markets,” said the report’s feature article, noting that China was already experiencing a declining trend in exports, which fell from a monthly average expansion in 2011 of 15.1 per cent year-on-year to 4.9 per cent so far in 2012.

Contributing to this trend had been the decelerating trade with the EU, which turned negative in February to only pick-up again in May.

“Given their dependence on exports, it remains to be seen how China and, to some extent, India will manage to stimulate their economies locally,” the report observed.

The June *MOMR* recommended that China needed to carefully direct any further stimulus to offset its recent deceleration, as too aggressive supportive measures might possibly lead to an overheating in select core asset markets.

“This would ultimately have unintended, negative global consequences,” it stressed.

In contrast, it said, India was facing declining output and rising inflation, which limited its ability to counter-balance this trend via expansionary monetary policies.

The report maintained that, given the renewed attention to macro-economic factors, the uncertainties facing Europe and the slowdown in the emerging economies had led to a shift in market sentiment.

This had triggered a strong outflow of financial funds

from the paper oil market, amplifying the recent downward trend in prices. Additionally, the current weakness of the Euro-zone had caused the value of the euro to decline significantly against the US dollar.

“These ongoing challenges to the world economic recovery have led to even larger uncertainties for oil demand in the second half of this year. Higher gasoline prices also could impact US demand growth during the driving season.”

Additionally, said the report, the surge in Japan’s oil usage could ease if the government were able to bring back its nuclear power plants into service.

“Amid these uncertainties for world oil demand, non-OPEC supply is expected to perform well in the coming quarters, despite disruptions in some countries, supported by growth in the US. At the same time, OPEC NGLs and non-conventional oil are projected to see a healthy increase during this period.”

The OPEC report said that, taking these developments into account, the second half of the year could see a further easing in fundamentals, despite seasonally higher demand.

“Indeed, firm global supply and higher OPEC production have led to a continued build in OECD commercial stocks. Leading the build has been US crude, with inventories now standing at the highest level since 1990.

“Moreover, high OPEC crude oil production standing above market requirements provides further confirmation that the market remains amply supplied,” the June *MOMR* concluded.



OPEC Ministers agree strict adherence to 30m b/d output ceiling



CHAIRMAN

OPEC's Oil and Energy Ministers have taken steps to reign in excess crude oil production in their efforts to maintain oil market stability and prices at a reasonable level.

The 161st Meeting of the OPEC Conference, which convened in Vienna in mid-June, agreed to strictly adhere to the Organization's total oil output ceiling of 30 million barrels/day.

At their talks, which were held directly after the 5th OPEC International Seminar, the Ministers met for five hours in closed session before agreeing on the cutback move.

"Under the agreement, we have asked Member Countries to adhere to 30m b/d. They are currently producing around 31.6m b/d, so they have to reduce output," Abdalla Salem El-Badri, OPEC Secretary General, told a press conference after the meeting.

He explained that not all OPEC Members were involved in the output reduction.

"Those Members who have been participating in the extra production of 1.6m b/d have been asked to bring the total back to 30m b/d," he stated. "The Members have agreed to do this. It is a collective decision."

SECRET



CHAIRMAN

SECRETARY GENERAL

SECRETARY GENERAL

Abdul-Kareem Luaibi Bahedh (c), Minister of Oil, Iraq and OPEC Conference President; with Abdalla Salem El-Badri (r), OPEC Secretary General; and Issa Shahin Al Ghanim (l), Qatar's Governor for OPEC and Chairman of the OPEC Board of Governors.

Asked about the danger of crude oil prices going too high as a result of the production cut, the OPEC Secretary General said that, as in the past, the President of the Conference had the power to call for an Extraordinary Meeting “if extreme prices in either direction were witnessed.”

El-Badri also revealed at the briefing that the subject of a new Secretary General for the Organization was discussed by the Ministers, adding that the process was still being considered and a final decision would be taken in December.

El-Badri’s second three-year term as Secretary General is due to come to an end at the end of 2012.



Dr Youcef Yousfi, Minister of Energy and Mines, Algeria.



Left: Eng José Maria Botelho de Vasconcelos (c), Minister of Petroleum, Angola; with Maria de Jesus Ferreira (l), Ambassador of Angola to Austria; and (r) Félix Manuel Ferreira (r), Angolan Governor for OPEC.



Abdul-Kareem Luaibi Bahedh, OPEC Conference President and Minister of Oil, Iraq.



Right: Wilson Pástor-Morris, Minister of Non-Renewable Natural Resources, Ecuador.



Above: Eng Rostam Ghasemi (c), Minister of Petroleum, IR Iran; with Seyed Mohammad Ali Khatibi Tabatabai (l), OPEC Governor for IR Iran; and Dr Ali Asghar Soltanieh, Ambassador, Permanent Representative, Permanent Mission of the Islamic Republic of Iran to the UN and other International Organizations.



Dr Falah J Alamri, Iraqi Governor for OPEC.



Above: Hani Abdulaziz Hussain (l), Minister of Oil, Kuwait, and Alternate President of the OPEC Conference; with Siham Abdulrazzak Razzouqi, Kuwaiti Governor for OPEC.

Right: Eng Abdurahman Benyezza (l), Minister of Oil and Gas, Libya; with Samir Salem Kamal (r), Libyan Governor for OPEC.



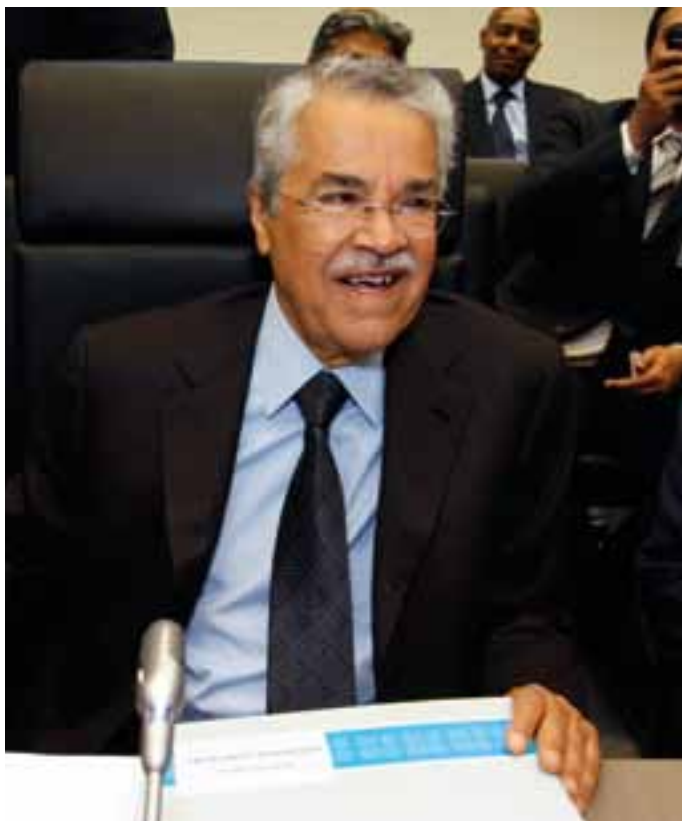
Mrs Diezani Alison-Madueke, Minister of Petroleum Resources, Nigeria.

Below: Dr Mohammed bin Saleh Al-Sada, Minister of Energy and Industry, Qatar.



During its deliberations, the Conference reviewed recent oil market developments, in particular supply and demand projections, as well as the outlook for the second half of 2012.

It considered the Secretary General's report, the findings of the OPEC Economic Commission Board (ECB), and the recommendations of the Ministerial Monitoring Sub-Committee (MMSC), which met ahead of the Conference under the Chairmanship of Hani Abdulaziz Hussain, Kuwait's Minister of



Ali I Naimi, Minister of Petroleum and Mineral Resources, Saudi Arabia.

Oil, and Alternate President of the OPEC Conference.

In a communiqué issued at the end of the Conference, the Ministers observed that the heightened price volatility witnessed during the early part 2012 was a reflection of geopolitical tensions and increased levels of speculation in the commodities markets, rather than solely as a consequence of supply/demand fundamentals.

It said the Conference had observed, however, that, more recently, downside risks facing the global economy, including the heightened Euro-zone sovereign debt concerns and the consequent weakening economic outlook, with its concomitant lower demand expectation, continued to mount.

“These ongoing challenges to the world economic recovery, coupled with the presence of ample supply of crude in the market, have led to the marked and steady fall in oil prices over the preceding two months,” the communiqué pointed out.

It said that the Conference further noted that although world oil demand was projected to increase slightly during the year, the rise was expected to be mostly offset by the projected increase in non-OPEC supply.

In addition, comfortable OECD stock levels — which were below the historical average in terms of absolute volumes, but well above the historical norm in terms of



Above: Mohamed Bin Dhaen Al Hamli (c), Minister of Energy, UAE; with Mohammed Hamad Omran (l), UAE Ambassador to Austria; and Ali Obaid Al Yabhouni (r), OPEC Governor for the UAE.



Rafael Ramirez (c), Minister of Popular Power of Petroleum and Mining, Venezuela; together with Alí Uzcátegui Duque (r), Ambassador of the Bolivarian Republic of Venezuela; and Dr Bernard Mommer (l), OPEC Governor for Venezuela.



At the press conference, Abdul-Kareem Luaibi Bahedh (second r), Minister of Oil, Iraq and OPEC Conference President; with his translator (second l); Abdalla Salem El-Badri (r), OPEC Secretary General; and Dr Hasan M Qabazard (l), Director, Research Division. At the podium is Angela Ulumna Agoawike, Head, PR and Information Department.

Right: Members of the OPEC Management team (l-r), Dr Hasan M Qabazard, Director, Research Division; Alejandro Rodriguez Rivas, Head, Finance and Human Resources Department, In Charge of Administration and IT Services Department; and Dr Hojatollah Ghanimi Fard, Head, Petroleum Studies Department. And below, (l-r) Asma Muttawa, General Legal Counsel; Oswaldo Tapia, Head, Energy Studies Department; Fuad Al-Zayer, (then) Head, Data Services Department; and Abdullah Al-Shameri, Head, Office of the Secretary General.



days of forward cover — indicated that there had been a contra-seasonal stock-build in the first quarter of 2012, an overhang that was predicted to continue throughout 2012. Stocks outside the OECD region had also increased.

“Taking these developments into account, the second half of the year could see a further easing in fundamentals, despite seasonally-higher demand.


“In the light of this, the Conference decided that Member Countries should adhere to the production ceiling of 30 million barrels/day,” said the communiqué.

It pointed out that in taking this decision, OPEC Member Countries had confirmed their readiness to swiftly respond to developments that might place oil market stability in jeopardy.

“Moreover, given the aforementioned economic downside risks, the Conference directed the Secretariat

to continue closely monitoring developments in the months ahead, keeping Member Countries abreast at all times,” it affirmed.

In other matters, the Ministers exchanged views on, *inter alia*, on-going multilateral developments on environment matters; the status of the Organization’s Energy Dialogue with the European Union (EU); the outcome of ongoing cooperation between OPEC, the International Energy Forum (IEF) and the International Energy Agency (IEA) in areas defined by the Cancun Declaration of March 2010; the outcome of ongoing work with the G20; and preparations for the UN Conference on Sustainable Development, (which took place in Rio de Janeiro later in June).

The Conference decided that its next Ordinary Meeting will convene in Vienna on December 12, 2012. 

Oil stability the responsibility of all stakeholders

— *Conference President*

The achievement of order and stability in the international oil market is the collective responsibility of all the parties in the industry and associated areas, including the financial institutions.

That was the important message conveyed by OPEC Conference President Abdul-Kareem Luaibi Bahedh at the opening of the Organization's 161st Meeting of the Conference at the Organization's Headquarters in Vienna in June. And he stressed it was something that the Organization had been saying for many years.

Bahedh, Iraq's Oil Minister, pointed out in his opening address: "We all stand to benefit from price stability, and so we must all be prepared to contribute to it in a meaningful, solid and sustainable manner.

"The big advances in dialogue and cooperation in recent years have provided useful support in this respect.

"And we should never lose sight of the central role oil plays in fuelling world economic growth and, more generally, in the beneficial evolution of mankind," he affirmed.

The Minister reminded Conference delegates that they were beginning their meeting at a time of heightened oil price volatility.

Earlier in the year, he observed, prices were pushed higher, driven by speculation. They had since fallen back to the levels they were seeing currently, affected by concern about the world economic outlook.

"Indeed, the overall economic outlook continues to be fragile — especially when we view developments in the Euro-zone and the potential spill-over effects across the global economy, notably in the emerging markets," he asserted.

Bahedh noted that the euro had established itself as one of the world's leading currencies over the past decade, "and so we hope that there is an early resolution of this crisis."

Elsewhere in the world, he said, there had been some weaker economic signals from other key areas, such as China, India and the United States, and these were also having an impact on the overall economic outlook.

"These developments in the world economy have increased the amount of uncertainty facing oil demand, although some growth can still be seen in the emerging economies."



*Abdul-Kareem
Luaibi Bahedh,
OPEC Conference
President.*

The Conference President said that, on the supply side, incremental non-OPEC supply and an increase in OPEC natural gas liquids would largely service the expected demand growth.

"Overall, the market remains well supplied with oil," he contended.

"However, there is still a disturbing level of price volatility. When we last met, the average weekly price of OPEC's Reference Basket was around \$109 a barrel. It then rose to almost \$124/b half-way through this six-month period, before falling again.

"Most recently, however, the price has become extremely volatile, with the Basket at one stage losing \$9.65/b in just four days.


"This volatility is a matter of much concern to us. So again we repeat OPEC's calls for better regulation of the international financial sector."

Meanwhile, said Bahedh, OPEC continued its efforts to stabilize prices.

He maintained that the agreement the Ministers had reached at their last Conference in December last year, had restored an important degree of certainty to the supply side of the market, at a time of much uncertainty about demand.

"We made it clear then that the agreement was designed specifically to cover the period up to today's Meeting. In the light of this, we shall look carefully at the present conditions in the market. Clearly, there are pressing areas of concern that need to be addressed," he added.

The Conference President also used the occasion to extend a special welcome to Hani Abdulaziz Hussain, Minister of Oil of Kuwait, who was attending the Conference for the first time as Head of his Country's Delegation, and Alternate President of the OPEC Conference.

"Let me also thank his predecessor, Dr Mohammad Al-Busairi, for his contributions to the Conference over the past year," he said. 



Petroleum: Fuelling Prosperity Supporting Sustainability

by Keith Aylward-Marchant

The 5th OPEC International Seminar provided a new opportunity for decision-makers and experts to examine the challenges facing the oil industry, in the congenial surroundings of the Festsaal at the Hofburg Palace in Vienna on June 13–14.

As Austrian President, Dr Heinz Fischer, said in his opening message, "I very much value the efforts of the Organization of the Petroleum Exporting Countries to extend the dialogue and cooperation on energy issues."

While the central theme of the Seminar was '*Petroleum: Fuelling Prosperity, Supporting Sustainability*', a much wider range of topics featured in the event, such as: the global energy scene, petroleum upstream and downstream, the oil market, the world economy, financial institutions, transportation, capacity expansion, investment, national and international oil companies, technology, the environment, sustainable development and energy poverty.

This reminded the estimated 700 people in the conference hall of how vast, complex and diverse are the issues facing the industry today, underlined the importance of interdependence in this dynamic, high-tech

Sponsors



age of globalization and instant communications, and re-emphasized the need for dialogue and cooperation.

The Seminar was divided into four main sessions dedicated to specific topics. OPEC Energy/Petroleum Ministers chaired each session and provided the keynote speeches. Session speakers included other OPEC Ministers, the OPEC Secretary General, non-OPEC Ministers, heads of intergovernmental organizations, oil company CEOs, and other top officials and experts. The speakers also participated in discussions at the end of each session, responding to questions from the floor. In addition, an OPEC Minister chaired a panel discussion that concluded the event on the second morning.

A gala dinner at Vienna City Hall on the



Special guest — Austrian President, Dr Heinz Fischer (sixth right), with OPEC's high-ranking officials (l-r) Mohamed Bin Dhaen Al Hamli, UAE Minister of Energy; Rafael Ramirez, Venezuela's Minister of Popular Power of Petroleum and Mining; Ali I Naimi, Saudi Arabia's Minister of Petroleum and Mineral Resources; Jose Maria Botelho de Vasconcelos, Angola's Minister of Petroleum; Abdurahman Benyezza, Libya's Minister of Oil and Gas; Youcef Yousfi, Algeria's Minister of Energy and Mines; Diezani Alison-Madueke, Nigeria's Minister of Petroleum Resources; Abdul-Kareem Luaibi Bahedh, Iraq's Minister of Oil and President of the OPEC Conference; Abdalla Salem El-Badri, OPEC Secretary General; Mohammed Bin Dhaen Al-Sada, Qatar's Minister of Energy and Industry; Wilson Pastor-Morris, Ecuador's Minister of Non-Renewable Natural Resources; and Hani Abdulaziz Hussain, Kuwait's Minister of Oil and Alternate President of the OPEC Conference. Not pictured is Iran's Minister of Petroleum, Rostam Ghasemi.



Ministry of Petroleum





In the front row – (r–l): Dr Heinz Fischer, Federal President of the Republic of Austria; Abdul-Kareem Luaibi Bahedh, Iraqi Oil Minister and OPEC Conference President; Abdalla Salem El-Badri, Secretary General, OPEC; Ali I Naimi, Minister of Petroleum and Mineral Resources, Saudi Arabia; Rafael Ramirez, Minister of Popular Power of Petroleum and Mining, Venezuela; and Mohamed Bin Dhaen Al Hamli, Minister of Energy, UAE.

evening of June 13 saw the presentations of the OPEC Award for Research to Professor Øystein Noreng of the BI Norwegian Business School and the OPEC Award for Journalism to Bloomberg’s OPEC news team.

In delivering the welcoming address, Abdul-Kareem Luaibi Bahedh, President of the OPEC Conference and Minister of Oil for Iraq, said: “As is the case with any Organization like ours, it is necessary to sit back and review the current situation from time to time, as well as reflect upon the new challenges.

“And when this is done by a group of leading stakeholders and experts with a shared commitment to progress in the industry and the advancement of mankind generally, then all the better. This is why we have been holding this series of OPEC International Seminars since 2001.”

Bahedh then welcomed to the platform Dr Heinz Fischer, the President of the Federal Republic of Austria, noting that the relationship between OPEC and Austria and the City of Vienna had gone from strength to strength since the Organization moved there in 1965.

Fischer thanked the OPEC President for his kind words about this relationship, adding: “It’s true ... It’s

a very positive relationship and we are proud to host you in Vienna.” He pointed out that the Organization’s significance and outreach had grown considerably over the decades. Turning to the Seminar itself, he said: “I very much value the efforts of the Organization of the Petroleum Exporting Countries to extend the dialogue and cooperation on energy issues.”

Centre of dialogue

“Questions such as the need for secure and affordable energy, sustainable development and poverty eradication have become increasingly important for today’s societies.”

Fischer noted that Vienna was host to many key international institutions, several of which were closely involved in energy matters. “The convening of important meetings of top international decision-makers and experts in our city, in discussing the energy-related challenges in today’s world, (is) highly beneficial to Vienna’s role as a centre of dialogue,” he stressed.

The first session focused on ‘The global energy scene’. Chaired by Ali I Naimi, the Minister of Petroleum

and Mineral Resources of Saudi Arabia, and with Rafael Ramirez, Minister of Popular Power of Petroleum and Mining of Venezuela as the keynote speaker, it looked at recent trends and energy outlooks, the challenges and opportunities facing the petroleum industry and energy generally, and potential game-changers in the industry, such as transportation, consumer behaviour and supply/demand patterns.

Other speakers were: Abdalla Salem El-Badri, OPEC Secretary General; Günther Oettinger, Commissioner for Energy, European Union; Ryan Lance, CEO of ConocoPhillips; Michael Suess, Member of the Managing Board, Siemens AG; and Wang Dongjin, Vice President, China National Petroleum Corporation.

At the end of the session, Naimi identified three key messages from the speakers. First, fossil fuels are here to stay for the foreseeable future. Secondly, technology will drive the growth of a variety of energy types. And thirdly, he said, if we want to have sufficient energy sources for a long time, we need to focus ‘very specifically’ on efficiency: “I believe that technology is going to help us in finding more fossil fuels, in developing renewable energies and also in increasing our use of energy efficiency.”

Session Two turned to ‘Oil and the world economy’. In the chair was Mrs Diezani Alison-Madueke, Nigeria’s Minister of Petroleum Resources, while Wilson Pástor-Morris, Ecuador’s Minister of Non-Renewable Natural Resources, delivered the keynote address. Another OPEC Minister was on the panel too — Rostam Ghasemi, Minister of Petroleum of the Islamic Republic of Iran.

World economic developments

This session looked at developments in the world economy, with particular emphasis on lessons learned from the current economic crisis. It also assessed the impact of the global business cycle and three-track economic recovery on the world oil market, and, more generally, examined the changing paradigm in global economic cooperation and governance.

Other speakers were: Jaipal Sudini Reddy, Minister of Petroleum and Natural Gas of India; Lars H Thunell, Executive Vice President and CEO, International Finance Corporation; and Michael Masters, Chairman, Better Markets Inc.

When the session had finished, Alison-Madueke focused on one special point. She said: “In terms of global energy and its demand, when we talk about it in fora like this, we talk about it at the very large scale. I

always like to point out that, where emerging economies are concerned, we need to be a little more fundamental and begin to look at global energy growth in terms of sustainable energy and, in particular, in terms of eradicating energy poverty.”

She continued: “And so those of us from emerging economies who are blessed with vast gas resources, as well as crude resources, begin to look at the ways and means to ensure that, as we move forward, we impact on the bottom line and ensure that we do begin to eradicate energy poverty.” She said this should involve moving into more creative areas and ensuring that we begin to use our resources, such as natural gas, as feedstock, as opposed to fuel.

Commercialization ventures

“In that way,” Alison-Madueke continued, “we ensure that we set up for posterity the sort of commercialization ventures, such as petrochemical plants, fertilizer plants, methanol plants, central processing facilities and so on and so forth, that, in turn, ensure that our economies have job-creation and employment-generation for now and for the future.” This was because, “at the end of the day, that, in turn, affects the cycle of oil as it relates to the global economy at the very fundamental, but the most critical levels of our economies.”

The next session stayed with the oil sector, but focused on ‘Capacity expansion and investment’. It was chaired by Mohamed Bin Dhaen Al Hamli, the United Arab Emirates’ Minister of Energy, and the keynote speaker was Mohammed Bin Saleh Al-Sada, Qatar’s Minister of Energy and Industry. Abdurahman Benyezza, Libya’s Minister of Oil and Gas, was also on the panel, as was Iraq’s Governor for OPEC, Dr Falah J Alamri, substituting for his country’s Minister of Oil, Bahedh.

The other speakers were the CEOs of Eni SpA and OMV AG, Paolo Scaroni and Gerhard Roiss respectively.

The session concentrated on four themes: capacity expansion plans and investment; uncertainties in demand and their impact on upstream investment decisions; strengthening cooperation between national and international oil companies — challenges and opportunities; and the challenges facing oil companies: upstream and downstream (notably oil prices, fiscal regimes and project costs).

At the end of the session, reflecting upon the highly topical nature of the issues under discussion and the importance of meeting the investment challenges to help

secure the future of the industry, Al-Hamli thanked the speakers “for their excellent presentations and interaction with the audience’s questions.”

The fourth and final session began proceedings on the second day and looked at the broader related issues of ‘Technology, the environment and policies’. Its specific themes were: the importance of multilateralism in addressing climate change; environmentally friendly technologies — solutions and challenges for the oil sector; new technologies in supporting the oil industry; technological developments and their potential impacts on oil demand; and policies affecting the energy scene.

It was chaired by Youcef Yousfi, Algeria’s Minister of Energy and Mines, and its keynote speaker was Hani Abdulaziz Hussain, the Alternate President of the OPEC Conference and Minister of Oil of Kuwait.



The Seminar moderators, Eithne Treanor and John Defterios.

Other members of the panel were: Ms Christiana Figueres, Executive Secretary, United Nations Framework Convention on Climate Change; Peter Voser and Brad Page, CEOs of Royal Dutch Shell plc and the Global Carbon Capture and Storage Institute, respectively; Urban Rusnák, Secretary General of the Energy Charter Secretariat; and Alan Crain, Senior Vice President, Baker Hughes.

When summing up the session, Yousfi said it was obvious that that the petroleum industry, environmental protection and technology innovation were very closely linked. He went on: “The discussions this morning have certainly contributed to a better understanding among the different actors.”

A two-hour panel discussion, on the subject, ‘Petroleum for progress and cooperation’, concluded the Seminar.

Chaired by José Maria Botelho de Vasconcelos, Angola’s Minister of Petroleum, the panel consisted of: Abdul-Hussain Bin Ali Mirza, Minister of Energy Bahrain; Aldo Flores-Quiroga, Secretary General of the International Energy Forum; Christophe de Margerie, Chairman and CEO of Total; Michael Lynch, President, Strategic Energy and Economic Research Inc; and Noreng, as recipient of the OPEC Award for Research.

The issues they focused on were: the role of oil within the global energy scene; the importance of multilateralism in stabilizing the world oil market; petroleum in a changing world economic landscape; and energy poverty and the quest for development.

Outstanding speakers

After the panellists had delivered short opening remarks, they took questions from the floor addressing issues raised during the Seminar.

“I am sure that you will agree that we have heard five outstanding speakers for this last session of the OPEC Seminar,” said de Vasconcelos. Their good contributions had confirmed what we all knew, namely that the global energy world was constantly changing. “As we confront one set of challenges, another set of challenges is not far behind,” he continued.

The moderators at the event were John Defterios and Eithne Treanor, who had also carried out this task at the 4th OPEC International Seminar in 2009.

Dr Hasan M Qabazard, Director, OPEC Research Division, described the event as “an absorbing, educational Seminar” in his closing remarks, which had “enabled us to take a fresh new look at many of the challenges facing the oil industry. And we have done this among experts and decision-makers from both within OPEC and elsewhere in the world.” He identified 16 key messages, which are listed separately in this feature.

After thanking all the parties involved in staging the event, Qabazard finished with the following message: “The 5th OPEC International Seminar does not end here. In a sense, it is only just beginning. It is now up to all of us to think carefully about what we have heard here over the past two days, as we return to our places of work. If this, with the passage of time, helps the industry perform a little better than it would otherwise have done, then the Seminar has clearly been a success.”



OPEC Conference President opens Seminar



Abdul-Kareem Luaibi Bahedh

OPEC committed to original objectives — market order and stability

*OPEC Conference President, Iraqi Oil Minister, **Abdul-Kareem Luaibi Bahedh**, made the opening address to the 5th OPEC International Seminar. In his remarks, he welcomed all participants and special guest, Austrian President, Dr Heinz Fischer. In highlighting the importance of the OPEC Seminar to furthering progress in the international energy and global economic arena, Bahedh had high praise for the relationship between the Organization, Austria and the City of Vienna, which, he said, had greatly enhanced OPEC's working environment.*

Vienna has been the home of our Secretariat now for nearly half a century. During this time, the world oil industry has changed beyond recognition.

Without any doubt, it has changed for the better. In OPEC, we feel privileged to have been part of this process and the benefits it has brought to mankind as a whole.

The challenges we face today as oil-producing, developing countries have evolved and diversified over the years.

However, we remain committed to the original objectives dating from our first meeting in Baghdad in September 1960. These relate to market order and stability for the present and the future.

They are outlined in the OPEC Statute as follows:

- The Organization shall devise ways and means of ensuring the stabilization of prices in international oil markets with a view to eliminating harmful and unnecessary fluctuations.

- Due regard shall be given at all times to the interests of the producing nations and to the necessity of securing: a steady income to the producing countries; an efficient, economic and regular supply of petroleum to consuming nations; and a fair return on their capital to those investing in the petroleum industry.

Since then, we have adopted important new challenges as they have arisen. At OPEC's 3rd Summit in Riyadh in 2007, our Heads of State and Government defined three guiding themes to cover future actions by our Member Countries and the Organization as a whole. These are:

- Stability of global energy markets.
- Energy for sustainable development.
- Energy and the environment.

In addition, OPEC has been at the forefront of the huge advances in dialogue and cooperation that have helped bind the industry together in today's fast-moving, high-tech, global market.

As is the case with any Organization like ours, it is necessary to sit back and review the current situation from time to time, as well as reflect upon the new challenges.

And when this is done by a group of leading stakeholders and experts with a shared commitment to progress in the industry and the advancement of mankind generally, then all the better.

This is why we have been holding this series of OPEC International Seminars since 2001.

Over the next one-and-a-half days at this year's Seminar, various important topical issues will come under scrutiny. These include the international oil market, the global energy scene, the world economy, the environment, sustainable development and technology. We shall also be assessing the present and future outlooks in these areas.


And who better to discuss these issues than the men and women who have left an indelible mark on the industry? These include Ministers from our own Member Countries and other oil-producing countries, heads of intergovernmental organizations, chief executives of national and international oil companies, industry analysts, academics and the media.

Their wisdom and insights will enrich our discussions during the Seminar.

Excellencies, ladies and gentlemen, at this point, I should like to thank all those who have been involved in organizing the event, under the overall direction of His Excellency Abdalla Salem El-Badri, the OPEC Secretary General.

Excellencies, ladies and gentlemen, in just three years' time, we shall be celebrating half a century of our excellent relationship with the Federal Republic of Austria and with the City of Vienna.

Since we moved our Secretariat to this fine international city in September 1965, this relationship has gone from strength to strength, to our mutual benefit. And we look forward to building upon this in the future, with the continuing friendship and cooperation of our hosts.

It now gives me great pleasure to welcome to the platform His Excellency Dr Heinz Fischer, the President of the Federal Republic of Austria, to deliver his welcoming address. 

Austrian President praises OPEC for dedication to energy dialogue and cooperation

I very much value the efforts the Organization of the Petroleum Exporting Countries (OPEC) makes to extend dialogue and cooperation on energy issues.

Questions such as the need for secure and affordable energy, sustainable development and poverty eradication have become increasingly important for today's societies.

Vienna has been home to OPEC since 1965. Your Organization's stature and outreach have grown considerably over the decades. In 2010, Vienna was honoured by being the venue of your 50th Anniversary celebrations.

On that occasion, you also inaugurated your new premises in Vienna to which you had relocated your offices in 2009; premises well suited to accommodate your need for up-to-date conference facilities and sophisticated support technologies.

Vienna is host to many key international institutions and several of them are closely involved in energy matters. The convening of important meetings of top international decision-makers and experts in our city, in discussing the energy-related challenges in today's world, are highly beneficial to Vienna's role as a centre of dialogue.

Contributing to the stabilization of global energy markets has become a main focus of your Organization's planning and coordinating activities.

Market and price volatility, with its disturbing, dis-



Dr Heinz Fischer

*The Seminar's special guest was **Dr Heinz Fischer**, Federal President of the Republic of Austria, who, in opening remarks, pointed to the impressive growth of OPEC's stature and outreach and paid tribute to the Organization's overriding commitment to ensuring stable energy markets and reduced price volatility. A slightly edited version of Dr Fischer's address is reproduced here.*

ruptive and damaging effects on both economic growth and investment, are addressed by your Organization on a daily basis.

This is even more important in today's crisis-stricken global environment which needs to recover from financial and economic turmoil.

You have chosen the avenue of engaging and promoting an enhanced dialogue between consumers and producers. There have been significant achievements, as reflected in the activities of the International Energy Forum (IEF) to which OPEC is strongly committed, but also in the ongoing meaningful dialogue between OPEC and the European Union (EU).

I am happy to underline that a number of Austrian companies have close links with OPEC Member Countries in terms of oil and gas activities — from exploration and production to refineries and petrochemicals, as well as in renewables.

There are good prospects for increased cooperation under the developing schemes of new energy corridors, in accordance with the EU's diversification strategy.

Austria, as a leader in hydropower development, can also help to develop infrastructure and hydropower schemes in OPEC Member Countries.

You are also firmly committed to spreading the benefits of petroleum. Your efforts aim at diversi-

fying economic development and at promoting social progress both in your Member Countries and for the benefit of the more disadvantaged countries and regions.

This mission has been carried forward, in particular, through the activities of your sister Organization, the OPEC Fund for International Development (OFID), which I have visited recently.

The funds mobilized since OFID's creation in 1975 for financial assistance to more than 100 countries and in cooperation with hundreds of organizations worldwide are really impressive. Equally as impressive is the target-oriented work of the Fund, which has more recently introduced a new and very timely key priority, namely combatting poverty, especially in the field of energy.

Energy being an enabling factor as a basis for health services, education and productive activities, should become universally accessible and affordable.

It is most reassuring that this aim, recently launched in the form of the United Nations Secretary General's initiative 'Sustainable energy for all', is so clearly shared by a huge and powerful stakeholder organization of energy producers, as is OPEC.

Ladies and Gentlemen, in the light of these praiseworthy targets and values, let me wish you good discussions and all success to your Conference.



Session One

The Global Energy Scene

Themes

- Recent trends and energy outlooks
- Challenges and opportunities facing the petroleum (energy) industry
- Potential game-changers in the industry (transportation, consumer behaviour, supply/demand, etc)



L-r:
Wang Dongjin, Vice President, China National Petroleum Corporation
Ryan Lance, CEO, ConocoPhillips
Rafael Ramirez, Minister of Popular Power of Petroleum & Mining, Venezuela
Ali I Naimi, Minister of Petroleum & Mineral Resources, Saudi Arabia
Abdalla Salem El-Badri, Secretary General, OPEC
Günther Oettinger, Commissioner for Energy, European Union
Michael Suess, Member of the Managing Board, Siemens AG



Ali I Naimi

Chairperson

Ali I Naimi

Minister of Petroleum & Mineral Resources, Saudi Arabia

Keynote speaker

Rafael Ramirez

Minister of Popular Power of Petroleum & Mining, Venezuela

Speakers

Abdalla Salem El-Badri

Secretary General, OPEC

Günther Oettinger

Commissioner for Energy, European Union

Ryan Lance

CEO, ConocoPhillips

Michael Suess

Member of the Managing Board, Siemens AG

Wang Dongjin

Vice President, China National Petroleum Corporation

The Chairman of the first session was **Ali I Naimi**, Saudi Arabia's Minister of Petroleum and Mineral Resources, who began by praising the OPEC Seminar, stating that it continued to improve and had become one of the major international events of today's energy market.

He said the first session would touch on a wide range of critical energy issues facing the world today. At the heart of discussion would be prospects for global economic growth.

In comments before introducing the guest speakers, Naimi pointed out that, over the longer term, and with the global population set to rise to nine billion by 2050, it seemed clear that economic growth was on an upward trajectory.

"Long-term global living standards are rising and so, long-term, demand for oil and gas will continue."

"From wherever growth comes, it is clear to me that economic progress will be powered by oil and gas, but also by an increasingly diverse energy mix. I welcome this and I believe the world will need to harness all the forms of energy it can if it is to meet the hopes and aspirations of people in the 21st century."

— Ali I Naimi

He said that while on the one hand this presented serious challenges to stakeholders, it offered tremendous opportunities for producing countries and the energy industry as a whole.

Naimi maintained that while the energy industry in general considered the long term, it was clear that most people were concerned about the short term and the “day-to-day” where, in the case of Europe at least, prospects were not so positive.

“The challenges facing the Euro area and the implications for this on the rest of the world will be central to the pace of global economic growth in the years ahead. I am sure the subject will be touched upon by our distinguished speakers here today,” said the Saudi Minister.

In global terms, he continued, the emerging economies were leading the way. China, in particular, had been the global engine for growth over the past decade, but other nations and indeed continents would have a greater role to play in the coming century, both in terms of energy supply and demand, he affirmed.

Naimi said it was worth noting that by the end of 2012, non-OECD oil demand would equal OECD oil demand for the first time in history.

“From wherever growth comes, it is clear to me that economic progress will be powered by oil and gas, but also by an increasingly diverse energy mix. I welcome this and I believe the world will need to harness all the forms of energy it can if it is to meet the hopes and aspirations of people in the 21st century.”

Naimi said the Seminar’s speakers would address many of the challenges and opportunities facing the industry, be they geopolitical, environmental, or technological.

“Climate change and how we address it continues to be at the forefront of many people’s concerns and issues around energy security and energy poverty remain high on the agenda.

“We must not forget as we gather to discuss the future that today some three billion people still depend on biomass and coal for their cooking and that 1.4bn people currently have no access at all to electricity. It is a sobering fact,” he said.

Naimi commended the work done by OPEC’s sister institution, the OPEC Fund for International Development (OFID), which, he stressed, had contributed hundreds of billions of dollars in assistance in saving and improving countless lives.



Rafael Ramirez

“But there is much work still to be done,” he said.

“So, to the challenges and opportunities, it falls on our eminent speakers here today to add their thoughts to the debate about the global energy scene and the problems and I hope some of the possible solutions,” concluded Naimi.

In a keynote address looking at the global energy scene from a Venezuelan viewpoint, the country’s Minister of Popular Power of Petroleum and Mining, **Rafael Ramirez**, told delegates that the Seminar was taking place at a very complicated juncture in the oil market.

He maintained that the capitalist economic system was undergoing a profound crisis, the economic, political and social consequences of which were affecting the majority of countries in the world.

An obvious manifestation of the crisis was the economic deceleration in the developed countries, which

“In a nutshell, the world is facing a situation in which it is argued that there is a dearth of investment opportunities and yet capacity is not coming onstream in an expeditious enough fashion in the majority of the most favourably placed countries.”

— Rafael Ramirez

had turned the possibility of a collapse in oil demand into a clear and present danger.

Ramirez said that to the economic crisis and the complexities that characterized the oil market should be added geopolitical events, which had taken place in a number of oil-producing countries, as well as the sanctions against Iran's oil exports.

“Unfortunately, sanctions, threats and even military aggression have become the main tool for settling international disputes, in particular those related to petroleum,” he said.

The Minister noted that, in the context of this situation, a number of changes had been occurring that were radically transforming the global energy scene. Among these was the rise to prominence of shale gas and shale oil, the prospects of arctic petroleum resources and ultra-deep water fields, the consolidation of China and India into the main engines of growth for the world petroleum market, and the clouded future of nuclear energy in the aftermath of the Fukushima disaster.

“I have no doubt that in our subsequent discussions, we will hear much about all these elements,” he affirmed.

Hence, said Ramirez, he wanted to direct his remarks to a series of extraordinarily important factors that had not changed much over the past few decades and whose discussion “we cannot avoid if we mean to attain the twin objectives that have brought all of us here together, the Seminar's overall theme — ‘Fuelling Prosperity, Supporting Sustainability’.”

Looking at the oil output response that had materialised outside OPEC, he said this had been of a limited

and insufficient magnitude to keep pace with the long-term demand growth rates expected.

The explanation for this was simple: given the state of the depletion of the bulk of readily accessible, low risk and low-cost petroleum resources, a stable price level of over \$100/barrel represented the minimum level necessary, if resources in more challenging or marginal locations were to be brought onstream quickly enough to cover the requirements of the market and in that way promote price stability.

Ramirez maintained that the governments of the major oil-consuming countries, and institutions like the European Union, the International Energy Agency, the International Monetary Fund and the World Bank, sought to impose a very different opinion matrix, according to which the current price of crude oil reflected a lack of investment opportunities for international oil companies, which, in turn, supposedly was attributable to the resurgence in resource nationalism among the oil-producing countries.

The implications of this message could not be any clearer, he said. Allegedly, irrational political factors were hindering necessary investments in the petroleum sector.

“As a complement to this message, there is a systematic campaign against OPEC which is ritually denounced as an illegitimate, if not downright, illegal cartel of state oil companies backed by their respective governments.

“But OPEC is not a cartel. It is an institution that exists because an oil market that is not subject to any regulation, or control, is neither functional, nor viable,” stressed the Minister.

He recalled that, before OPEC, such regulation used to be in the hands of the Railroad Commission of Texas and the companies known as the ‘Seven Sisters’.

“OPEC's detractors would prefer to forget this, lest it become clear that their hostility towards the Organization has little to do with the rejection of the idea that oil production should be subject to regulation, and a lot to do with the fact that the administration of quotas is in the hands of a group of sovereign developing countries and no longer in the hands of the companies and the governments.”

But Ramirez posed the question that, given that approximately half the cumulative global production of petroleum had occurred after 1980, where would the world be without OPEC's management of petroleum supply over the past 50 years?

“What hope could there be of meeting the world’s current demand for oil and where would the oil price be if the exploitation of the giant fields of OPEC Member Countries had been undertaken with the same criteria applied to fields in non-OPEC countries?”

Ramirez maintained that the discussion of these topics made evident the need to foster dialogue mechanisms and forums like the OPEC Seminar that would allow the presentation and conciliation of producer and consumer countries’ interests.

In that sense, he mentioned two initiatives in which OPEC had contributed to keeping this effort going forward: the Joint Organizations Data Initiative (JODI) and the International Energy Forum (IEF).

The idea behind these two initiatives was that price instability could be controlled by means of a more transparent and timely release of information and data, on the one hand, as well as dialogue between producers and consumers that sought to build common ground between the parties, rather than stress their differences, on the other.

“The problem with these initiatives is that, worthy as they may appear, some sectors are not in a position to deliver on their promises,” he observed.

Firstly, said Ramirez, the actions of key participants in these initiatives were inconsistent with their guiding principles, which served to undermine their foundations.

For example, the IEA was one of the main JODI sponsors, but, in preparing its own estimates of OPEC oil production, the agency deliberately chose to disregard the official figures submitted by OPEC Members to JODI.

This had led to significant divergences which only served to muddy the waters and confuse the market, in terms of the actual state of global oil supply.

In the case of Venezuelan production, for example, the divergence between IEA estimates and official figures recently reached a maximum 750,000 b/d.

“The agency never gave any explanation as to how these divergences arose in the first place and, again, declined to do so when it recently adjusted its estimates upwards, even retrospectively,” observed Ramirez.

Likewise, he said, the open and constant dialogue that supposedly was meant to give the IEF its reason for being was conspicuous by its absence when, for example, the member countries of the IEA decided, unilaterally, and in parallel to NATO air strikes, to release strategic petroleum stocks in response to the events in Libya.

“And what is one to say when the same countries that pumped hundreds of billions of dollars into their economies to palliate the consequences of the reckless actions of their own banks, assume the position that the actions OPEC Member Countries take to stabilize the price of oil constitute an example of unacceptable behaviour on the part of a cartel?”

“And what to say also about the institutional dialogue between OPEC and the European Union, when the latter, at the same time, moves forward with an ever more severe embargo against the oil exports of Iran, a Founding Member of OPEC?”

“Where does that leave the principles of freedom of commerce and market transparency?”

Ramirez said the second, no less important, problem which affected initiatives such as JODI and the IEF was that they did not address the pathology underlying the volatile and unstable behaviour of the petroleum market, and which had to do with investment in oil production activities happening in a timely fashion and in their required magnitudes.

“In a nutshell, the world is facing a situation in which it is argued that there is a dearth of investment opportunities and yet capacity is not coming onstream in an expeditious enough fashion in the majority of the most favourably placed countries,” noted Ramirez.

He said the explanation behind this paradox was quite simple: these projects were being hampered by a continued refusal on the part of the consumer governments and international oil companies alike to recognise, unequivocally, the legitimacy of oil-producing countries’ expectations to receive a fair and just remuneration, in exchange for allowing the exploitation of a valuable, depletable and non-renewable natural resource that belonged to them.

During the decades of the 1980s and 1990s, a number of oil-producing countries were persuaded, pressured, convinced, or deceived into accepting fundamentally asymmetrical and unfair arrangements, in which all profits and rents accrued to the investors, while nothing, or virtually nothing, was left for the resource owner.

The Minister said Venezuela was among those countries that succumbed to the pressure — with disastrous results. In the years before the government of President Hugo Chávez, the so-called Oil Opening Policy was developed, whereby vast petroleum regions were given to inter-

national oil companies, undermining the fiscal regime prevailing at the time.

Thus, in 2002, when production pursuant to these contracts reached a figure of 850,000 b/d, 30 per cent of total Venezuelan production, the petroleum industry managed not to pay any income tax whatsoever.

Ramirez said the situation continued to deteriorate with the coming onstream of the upgrading projects in the Orinoco Oil Belt, signed during the Oil Opening, where the royalty rate applicable was only one per cent.

In 2004, while the average price of the extra-heavy oil used in these upgrading projects was around \$25/b, the fiscal income of the Venezuelan government was less than 30 cents per barrel.

“It is not an exaggeration to say that these projects deserve the accolade of ‘most unfavourable in the history of the Venezuelan petroleum industry’.”

Ramirez asserted that producing great volumes of oil, without generating any fiscal income in exchange, was unsustainable and compromised the very viability of the Venezuelan state.

The government of President Chávez had decided to take a series of measures that reasserted the sovereign control of the Venezuelan people over the country’s natural resources.

“The policy of full petroleum sovereignty, the change in direction, as well as the rescue of our fiscal income, recognition within OPEC, and the defense of the oil price, provoked the violent reaction of transnational interest and the coup d’etat of the year 2002 and the subsequent sabotage of our national oil company, PDVSA,” Ramirez stated.

“However, in this change of oil policy, private oil companies were always offered the opportunity to remain in Venezuela with profitable operations and thus it was reflected in our laws.”

The Minister said that even though companies from the most varied of nationalities accepted the country’s offer for reform, and complied with Venezuelan laws, two refused — ExxonMobil and ConocoPhillips.

Both firms resorted to international arbitration against Venezuela before the World Bank’s International Centre for the Settlement of Investment Disputes (ICSID), questioning the Venezuelan state’s sovereign rights on tax matters.

“The presumptive right to take the Republic to such arbitration came from the bilateral investment treaties

foisted upon the country during the 1990s,” Ramirez explained.

“The signing of bilateral investment treaties in Venezuela, as in other places, dealt a mortal blow to the principle of permanent sovereignty over natural resources and gave way to the permanent threat against our sovereignty,” he added.

Ramirez said the flood gates were opened to the “judicial terrorism which we continue to suffer at this moment.

“Thus, ExxonMobil attempted an international freeze of the assets of our national company, PDVSA, before the English courts, after having frozen PDVSA accounts in the United States, and also introduced a claim before an ICC tribunal, from which it ultimately obtained less than three per cent of the amount claimed.

“Furthermore, ExxonMobil is suing the Republic before ICSID for the fantasy sum of \$18bn.”

The Minister said that ConocoPhillips, for its part, aside from occupying a refinery in which Venezuela held a shareholding interest in the US, also had another claim against the Republic before ICSID for the no less fantastic sum of \$31bn.

“The attitude of these enterprises brings to mind the colonialist high-handedness which has done so much harm to the world.”

Ramirez said the Venezuelan case was a very good illustration of a sovereign government from a large oil-producing country having to concentrate its managerial and administrative capability on the task of restructuring legacy projects, unsustainable for the country, rebalancing disastrously asymmetrical contracts and facing litigation processes.

“As far as the oil-consuming governments go, their enthusiastic espousal and promotion of policies, like the Oil Opening carried out during the 1990s in Venezuela, has had the consequence that current crude oil production capacity in a number of countries is significantly lower than what it could have been in the absence of such policies,” he contended.

“A fundamental element behind supply stability has to be the economic, political and social stability of the oil-producing countries.

“In Venezuela, we finally managed to overcome the dire consequences of this Opening and we have repositioned ourselves. At this point in time, we are well on the

way to increasing our production capacity, this, by the way, on the basis of the new mixed enterprises, which have already begun their operations in the Orinoco Oil Belt — the most important new petroleum province in the world with its 1.3 billion barrels of oil in place.

“In the long term, our potential is even greater. The Orinoco Oil Belt guarantees that Venezuela, with its proved and certified crude oil reserves of 297.5 billion barrels, will continue to be one of the main oil-producing countries of the world.”

Ramirez said the lesson from this experience was unequivocal: access to resources would be compromised to the extent that the populations of the territories from which they were extracted felt they were not getting their fair share from the liquidation of their collective patrimony, as such remuneration ought to be obtained in the form of a royalty.

“However, it is rather more likely that we will continue to hear through the big agencies about how producing countries should adjust their fiscal regimes downwards, in order to attract the capital of international oil companies.

“And if they do not do so, then shale oil will come to the rescue of the consumers, allowing them to shake off the yoke of OPEC, even though we know that thousands upon thousands of high-decline and high-environmental impact oil shale wells will be necessary to produce even a fraction of the volume of oil exported from OPEC Member Countries.”

Ramirez stated that Venezuela was a Founding Member of OPEC, and its President, Hugo Chávez, its Government and its people all had a high awareness of the country’s role as one of the most important petroleum-producing and exporting countries of the world.

“We defend, wherever we go, the right to exercise permanent sovereignty over our natural resources and secure a fair compensation and benefit for our people. Within this framework of respect and sovereignty, we advocate for a sincere and constructive dialogue with consumer countries,” he said.

“In this Seminar, we will listen to and debate over prospects and new developments. We welcome all advances. We present to the world the fundamental elements for the stability, sustainability and development of the petroleum market and all its sources of supply.

“However, we insist on sustainable petroleum pro-

duction from the economic, social, environmental and political points of view. The prevailing economic model on the planet we live is unequal and predatory with regard to natural resources. Hopefully, equilibrium will be reached in world energy consumption. These are permanent topics in the debate surrounding the future of the human species of our planet,” concluded the Minister.

Looking at the global energy scene, **Abdalla Salem El-Badri**, OPEC Secretary General, said it was important to consider “where we are today, where we might be going, and how we might get there.”

For OPEC, this was laid out every year in its World Oil Outlook (WOO). El-Badri said that in the reference case of the WOO’s most recent version, which was published at the end of 2011, energy demand increased by more than 50 per cent between 2010 and 2035.

And over the same timeframe, the global population was expected to expand from 6.9 billion to almost 8.6 billion.

All energies witnessed growth, although overall shares shifted over time. Fossil fuels — which currently accounted for 87 per cent of the world’s energy supply — would still contribute 82 per cent by 2035.

Oil would retain the largest share for most of the period to 2035, although its overall share was expected to fall from 34 per cent to 28 per cent. It would remain central to growth in many areas of the global economy, especially the transportation sector.

According to the WOO, coal’s share would remain similar to today, at around 29 per cent, whereas gas would increase from 23 per cent to 25 per cent.

In terms of non-fossil fuels, renewable energy was forecast to grow fast. But as it started from a low base, its share would still be only three per cent by 2035.

Hydropower would increase only a little — to three per cent by 2035. Nuclear power would also witness some expansion, although prospects had been affected by events in Fukushima. It was seen as having only a six per cent share in 2035.

The OPEC Secretary General pointed out that to meet this growth, there were plenty of available resources.

For oil, conventional, as well as non-conventional resources, were sufficient for the foreseeable future.

“We expect to see significant increases in conventional oil supply from Brazil, the Caspian region, and



Abdalla Salem El-Badri

“We cannot avoid speculation and volatility altogether.

However, it is essential we look to mitigate extreme volatility and excessive speculation.

These are detrimental.”

— Abdalla Salem El-Badri

Moreover, technological advances would continue to extend the reach of the industry — helping to reduce costs, unlock additional resources and increase supplies.

El-Badri told delegates that it was clear future oil demand could be met.

“However, the future is rarely what we think it is today. There are a variety of uncertainties that may adversely impact demand,” he added.

In the medium-term, he stated, the main issue was the global economy. There were many questions, but, at present, few answers.

“In Europe, what will be the outcome of the sovereign debt crisis and the austerity versus growth debate?

“Across the Atlantic, the US economy seems to be relatively resilient, but challenges remain.

“Japan is expected to continue its recent recovery, but expansion remains fragile.

“Is the recent slowing down of China and India’s economic growth a long-term trend, or just a short-term issue?

“And in developing countries, will problems in the OECD region spill over into their economies, particularly in terms of reduced demand for their exports, as well as less investment capital?” El-Badri asked.

He said that from the demand side, there were also the environmental and energy policies of a number of consuming countries.

“Obviously, every country has the sovereign right to set its own policies. But it is essential that they provide a clear idea as to the potential impact of policies on future oil consumption levels, as well as overall energy supply and demand patterns,” said El-Badri.

He stated that it was easy to understand why this was necessary — given the many uncertainties associated with oil demand projections that were highlighted in scenarios in the WOO.

of course OPEC, as well as steady increases in non-conventional oil and natural gas liquids,” he affirmed.

“Nevertheless, some continue to question whether this projected oil demand increase can be met. Let me firmly state: yes it can.”

El-Badri said it was true the world would need significant additional production capacity to 2035, including to compensate for natural decline in oil fields. But this was nothing new for the industry. This had always been the case. Today’s challenges were no different from those faced in the past. Our industry has always been able to deliver.

He stressed that significant investments were being made today. For the five-year period 2012-16, OPEC’s Member Countries currently had 116 upstream projects in their portfolio. Should all projects be realized, this could translate into an investment figure of close to \$280bn.

Taking into account all OPEC liquids, he continued, the net increase was estimated to be close to 7m b/d above 2012 levels, although investment decisions and plans would obviously be influenced by various factors, such as the global economic situation, policies and the price of oil.

There was the Accelerated Transportation Technology and Policy scenario, which underscored how technologies and policies could advance and quicken developments in the transportation sector.

And there were scenarios that examined the possibilities for higher and lower economic growth.

“What these scenarios underscore are genuine concerns over security of demand. There are major demand uncertainties,” said the OPEC Secretary General.

“I am sure we can also appreciate that this leads to investment uncertainty. And if investments are not made in a timely and adequate manner, then future consumer needs might not be met.”

El-Badri said the industry as a whole also faced other challenges, including the ongoing need to reduce excessive market volatility.

“We cannot avoid speculation and volatility altogether. However, it is essential we look to mitigate extreme volatility and excessive speculation. These are detrimental.”

He said the issue of speculation was a topic that had seen a number of joint workshops organized between the IEA, the IEF and OPEC, as agreed upon at the 12th IEF in Mexico in 2010.

Then there was the acute need for skilled human resources. “Given today’s economic climate, this may at times be forgotten. With strong competition from other sectors for skilled workers, there is a need to address the oil industry’s difficulties in finding and hiring labour at the global level,” he maintained.

“And here, I should like to underscore one further challenge; that of energy poverty. We need to remember that 1.4 billion people have no access to electricity and some 2.7 billion rely on traditional biomass for their basic needs.

“Alleviating energy poverty is a priority for sustainable development. It needs the urgent attention of world leaders,” said El-Badri, stating that the Rio+20 meeting in June provided a great opportunity in this regard.

He said that in looking at the challenges facing the industry, they should also think about the often related opportunities, such as advancing collaboration between producers and consumers, as well as between national oil companies and international oil companies on various issues.

“It is important to have input, as appropriate, from each and every stakeholder.”

They should also seek to share experiences with new technology. They had seen this, for example, in efforts to reduce the industry’s environmental impact — through such technologies as carbon capture and storage, which had been discussed and shared by many in the industry.

Another area involved strengthening human resources by facilitating education and training in different energy disciplines and making the industry an attractive and long-term career choice for the young.

El-Badri said they should also work towards a more stable environment — one in which extreme volatility and excessive speculation were no longer such a prominent market feature.

“And, of course, alleviating energy poverty for billions around the world” was another issue, he said.

Touching on another theme highlighted as a “potential game-changer” for the industry, El-Badri pointed to shale oil and shale gas. “It is clear they are already changing the energy landscape in the US and there are evidently possibilities elsewhere. However, challenges associated with the environmental impact of hydraulic fracturing remain, especially on groundwater supplies. And while technology and scientific innovation will help eventually solve these problems, it will take time,” he observed.

The OPEC Secretary General said there was also much talk about alternative transportation technologies.

“At OPEC, we recognize that there will be developments and advancements in areas such as electric and hybrid vehicles. They will see market growth, albeit from a low base.

“However, we believe that oil and increasingly efficient conventional powertrain technologies will remain central to the transportation sector in the foreseeable future.”

Concluding, El-Badri reminded delegates that energy use would continue to grow. “It will remain central to our everyday lives; the heartbeat of our increasingly interdependent and complex world.”

He said that in terms of resources, there were more than enough to meet expected demand growth. And overall, fossil fuels would continue to supply over 80 per cent of the world’s energy needs by 2035, with oil the energy type with the largest share for most of this period.

“Finally, given the long-term nature of our industry and the need for clarity and predictability — not only for



Günther Oettinger

oil, but energy in general — I would like to leave you with three appropriate words: ‘stability, stability, stability’.

“Stability for investments and expansion to flourish; stability for economies around the world to grow; and stability for producers that allows them a fair return from the exploitation of their exhaustible natural resources.

“Stability is the key to a sustainable global energy future for us all,” he concluded.

The next panelist to speak was **Günther Oettinger**, Commissioner for Energy at the European Union (EU), who in looking at the energy sector in general, pointed out that, last year, oil had been again at the heart of politics.

First, Libya’s oil production was suspended, with the consequent disruptions of supply that eventually led to a release of oil stocks.

And just before that, there was the nuclear disaster in Japan, which led to a shift from nuclear energy to other sources of energy, notably oil, provoking a substantial

“Energy needs have become closely linked with food production and climate change, so we need to actively look at broadening our energy base, in order to provide access to energy for all and prevent energy poverty, while not affecting food production or negatively affecting the climate.”

— Günther Oettinger

increase in oil imports in Japan and consequently an increase in prices. “Again, this has revealed the global interdependence of energy sources. If one source of energy needs to be replaced, it will have to find a substitute with all the consequences that are entailed in terms of availability and prices,” he maintained.

Oettinger said that this probably also explained to some extent why oil would continue to play a leading role in the world’s energy mix.

“All our scenarios, including the most ambitious ones, indicate that by 2030 oil will still represent around one-third of our energy needs. Currently, more than a third of our energy portfolio, and almost all the energy used in the transportation sector, will rely on oil.”

The EU was currently importing more than 80 per cent of its oil needs. “Even with our energy efficiency, this figure may increase up to 90 per cent, or more, within ten years. Our challenge, therefore, is to keep a secure and affordable oil supply against a background of rising demand from other parts of the world, while maintaining the highest environmental standards.”

Oettinger said that over the past years, the global energy scene had witnessed significant new developments in terms of resources, technology development and demand, which had redefined the global energy market.

They had seen the birth of LNG technology developed to economic scale, including new custom built ships, gasification and degasification plants, which had led to a genuine LNG market.

“We have witnessed the so-called shale gas revolution in the US, which could lead the country to become a net gas exporter in the near future.

“And other countries around the world are currently assessing their unconventional gas potential, including in the EU.”

Oettinger said a second revolution was currently underway in the US on the back of unconventional gas, namely unconventional oil and shale oil production.

“This has already led to the country significantly reducing its petroleum product intake in the Gulf of Mexico, which has meant improved refining margins in the area with an impact on European North Atlantic refiners.”

The EU Energy Commissioner said they had seen the advent of gas-to-liquids technology at commercial scale, able to provide cleaner fuels for the future. There had been huge leaps in the efficiency of car engines and fuel efficiency and battery technology.

Renewable technologies were becoming more major. In 2010, for the first time ever, private companies in developing countries had invested more in renewable energy than their competitors in the developed nations.

In the past year-and-a-half, the China Development Bank had offered more than \$34bn in credit lines to China’s solar companies.

“Finally, we might now be able to access regions of the world for energy resources which were previously inaccessible, such as the deep sea and the Arctic.

“And yet, this does not seem to be enough to ensure a continuous access for our citizens to affordable, efficient and clean energy in the future,” commented Oettinger.

He said they still faced a number of challenges. The world population was growing significantly and was set to reach 9bn around 2050. This meant a significantly growing middle class and aspirations for future growth and increased demand for energy.

Non-OECD countries were expected to account for over 90 per cent of the global energy demand increase in the coming decades. This could have a dramatic effect on prices.

“Energy needs have become closely linked with food production and climate change, so we need to actively look at broadening our energy base, in order to provide access to energy for all and prevent energy poverty, while not affecting food production or negatively affecting the climate,” he claimed.

“So far, we have seen impressive developments in the field of energy, but we cannot relax in our efforts as our customer base for energy increases and so do the energy needs.”

Oettinger said the energy challenge of increasingly greater demand for increasingly scarce resources required a global solution, not as a best case scenario, but as a matter of necessity.

“No matter what we do, the cost of the energy system will go up, due to increasing global demand, and global prices are likely to continue to be volatile. It is therefore essential to strengthen the resilience of our energy system. But how do we do this?”

He said some options worked well in all scenarios, namely energy efficiency and renewable energy investments.

“We are still wasting too much of the energy we are producing with great effort. Only if we increase our energy efficiency and reduce energy consumption can we cope with the challenge of investment costs,” he contended.

Oettinger said the share of renewables was also growing significantly. Over time, renewables would become more established in the energy mix.

“We also expect natural gas to remain a key element of the EU energy mix, due to its advantages in terms of sustainability and flexibility, availability and security of supply and its competitiveness vis-à-vis other fuels.”

Natural gas, he stated, was a fossil fuel with the lowest CO₂ emissions and could therefore contribute to a considerable reduction of the EU’s greenhouse gas emissions.

“In order for gas to fulfill its potential, we need to make the gas market much more flexible,” he asserted.

Rigid pricing structures that covered the gas price to oil and rigid transport contracts that prevented gas from easily being transported where it was most needed did not help.

Public policy, said Oettinger, must focus not only on competitive energy pricing, it must ensure that energy saving and technology investment opportunities were available across the whole economy, including for energy intensive companies.

“That is what European energy policies are doing, giving energy consumers a stronger hand to negotiate supply deals, involving businesses better in technology development and promoting energy efficiency awareness.”

The EU Energy Commissioner said private investors and governments would only invest in energy if there was a more stable framework that guaranteed more predictability.

“This is why we developed the Energy Roadmap 2050. It is a basis for discussion and it is intended to facilitate



Ryan Lance

“Throughout history, we have seen technology push back successive forecasts of peak oil and gas production.

The North American shale revolution is the latest example.”

— Ryan Lance

“Reinforced cooperation among all energy actors and stakeholders, such as we have in the room here today, is essential.”

Such a comprehensive cooperation, he continued, should be mutually beneficial and should address a wide range of topics, such as regulatory issues, the enhancement of market transparency, cooperation on energy efficiency and renewables, research and technology innovation, and assessment of long-term energy supply and demand perspectives.

For its part, he concluded, the EU had a lot to offer to its international partners: an integrated internal market of some 500 million consumers, a world class energy technology industry, very advanced research in renewable energy and energy efficiency and a stable, transparent and non-discriminatory and legally binding energy policy framework.

decision-making on energy policy post-2020. We must also improve research and development, which will bring more cost efficient solutions in the future.”

Oettinger said this included progress with carbon capture and storage (CCS) and/or carbon capture and utilization (CCU), in particular for fossil fuel power plants.

“Without CCS, coal and also gas-fired power plants will not be compatible in the long run with our climate objectives, yet these energy sources are of crucial importance for many countries. CCS and CCU are therefore a much needed option, not only for power generation, but also for heavy industries,” he maintained.

Nuclear energy, said Oettinger, would also play a relevant or important role in countries where it was accepted. It remained a source of low carbon energy.

The role of the EU was primarily to ensure a level playing field and the highest safety and security standards for nuclear energy. It was increasingly impossible to view specific energy sources individually and in an isolated form.

Oettinger told the Seminar that the energy scene was moving fast and the only way to keep up with the pace was for all energy actors to cooperate.

Addressing the Seminar from the perspective of an international oil company, **Ryan Lance**, Chief Executive Officer of ConocoPhillips, informed delegates that six weeks previously, the company had spun off its downstream business into a separate company.

It meant that today ConocoPhillips was the world’s largest independent exploration and production company, based on production and reserves.

“We are certainly excited about the future of this business and the world energy business in general.”

Lance said there were several reasons for this. First was the demand outlook. Over the short term, they faced economic uncertainty. There was the European sovereign debt crisis, as well as slower growth in the US and the emerging markets of China and India.

“But over the long term, the outlook is bullish. That is thanks to 80 million people per year joining the global middle class, around half of that being in China. That is more than double the recent historical average of 30m people,” he affirmed.

Lance pointed out that these new consumers needed energy for their homes, their appliances, their automobiles and their work places. It was creating significantly higher oil demand in the developing countries.

This growth, he said, would outweigh market trends in the developed OECD countries in which oil demand had probably peaked.

“We also expect a transition in energy sources. But it will be a very slow one and will take decades for renewable sources to achieve price competitiveness and the scale they will need to meet a major portion of society’s energy needs,” he maintained.

He reminded Seminar participants to keep in mind that an earlier transition from coal to oil, as the world’s leading source, took about a century to complete. And even decades afterwards, coal remained the second leading source.

Lance stated that all credible forecasts indicated that by 2035 oil would still be the number one source. It would be followed by coal, natural gas and renewables.

“So oil does have a long future ahead of us. Meanwhile, natural gas is essential in helping to meet the rising demand in electric power. And that is thanks to the abundance of the resource, environmental attributes and the near global availability of LNG.”

In fact, continued Lance, LNG was already helping to fill the energy gap created by countries that were abandoning nuclear power, following the disaster in Japan. And for countries that wanted to quickly and inexpensively reduce their greenhouse gas emissions, natural gas could replace other fossil fuels.

“Throughout history, we have seen technology push back successive forecasts of peak oil and gas production. The North American shale revolution is the latest example,” observed Lance.

“We are also optimistic that both governments and consumers are becoming more aware of the greater abundance of oil and natural gas. For too long, we have faced a perception in consuming nations of resource scarcity.”

He stated that, in the US, substantial investments had been made in coal and renewable sources. And

state governments had mandated the use of renewable power. Much of this was done in the belief that natural gas would be too expensive. In fact, it was now the lowest cost power source with its low fuel and capital costs.

But Lance maintained that even with today’s greater resource abundance, it would be a challenge to develop the supplies fast enough to satisfy demand. Also, energy security remained a strong concern.

“So we expect continuing interest in diversification of energy sources,” he affirmed.

Meanwhile, said Lance, within the industry, a great deal of new production was needed, not only to meet the new demand, but also to replace the natural decline in production. In fact, he said, 80 per cent of the supply by 2035 would go to make up this decline.

“Anyone who mistakenly believes that oil and natural gas is not a growth business need only consider one statistic — the IEA estimates that cumulative investments of \$20 trillion will be necessary to satisfy energy demand by 2035.”

Lance pointed out that some of this investment would be needed in the OPEC nations. Although some supply uncertainties remained, they were primarily political and geopolitical in nature.

“In short, government actions or turmoil might restrict access to production. This is a different type of challenge to our industry and it is different to resource scarcity, with different policy implications,” he said.

Lance said ConocoPhillips’ optimism about the future was based on several game-changers that were transforming the industry.

“One of those my country, the US, is heavily involved in is the shale revolution in North America. As recently as 1990 natural gas production, reserves and demand were all falling. But since then, proved reserves have increased by 68 per cent,” he disclosed.

“Now the US has nearly a century of supply and production is up by one-third just since 2005 and with future growth of 20 per cent expected by 2035.”

Lance said the greater availability of natural gas had brought prices down and helped revive demand, particularly in the energy-intensive industries.

“We are seeing construction in new petrochemical plants, steel mills and other facilities in the US that in years past have gone elsewhere. North America is now

essentially energy independent in natural gas, an achievement until recently thought impossible,” he observed.

The US no longer needed LNG imports. In fact, said Lance, it would become an exporter in the next few years, from the lower 48 states to Alaska.

Meanwhile, he continued, the new shale technology was being applied to light, low-sulphur crudes as well.

“Keep in mind that US reserves peaked in 1970 and by 2008 had fallen by half. But since then, reserves have grown, while annual production is up by 14 per cent, mostly from shale. It is the first meaningful growth in over 20 years.

“We expect US shale liquids production to grow by 150 per cent by 2020. Thanks to both the oil shale in the US and the Canadian oil sands, North America could become self-sufficient in oil as well by 2025 — and even an exporter,” maintained Lance.

He said that although it was too early to predict how far the shale oil revolution would go, no one expected the level of imports to be anywhere near Saudi Arabia’s 8m b/d.

“Meanwhile, shale is being found worldwide and it has been identified in dozens of countries and many more have not yet been assessed. Development in most cases will not be as rapid as in North America,” Lance pointed out.

“There we have private mineral rights available for leasing, a well-developed service industry, pipeline infrastructure, a regulatory tax framework and an experienced workforce. Few countries offer the same contribution, but development will occur.”

Lance said ConocoPhillips was pursuing shale, not only in the US, but in Canada, Australia, Poland and other nations.

“We do not know how significantly international shale oil developments will impact global markets, but following North American imports will certainly enable the industry to further meet rising demand,” he forecast.

Changing markets also created both opportunity and challenges. For example, said Lance, new trade relationships were developing not only between nations, but between companies.

And some of the resources were particularly difficult in nature, such as working in shale, or other tight formations, developing resource trends that spanned hundreds of miles and thousands of wells.

Or, operating in the even deeper offshore water,

harsher climates, such as the Arctic, or producing in high-temperature, high-pressure reservoirs, or with corrosive gas streams.

Or producing LNG both onshore and offshore — the list went on.

“The scale of today’s opportunities and challenges suggest that, more than ever, there are benefits through collaboration,” commented Lance.

He stated that whether there was access to resources, technology, experience and expertise, people, or capital, “we all have the strengths to share in the needs to address them all.”

A rising number of international players were partnering in North American shale projects, the oil sands and in deep water. Beyond access, they were gaining knowledge; knowledge of resources assessment and development risk mitigation, cost control and best practices in safety and environmental stewardship.

“We all probably recognize the mastery of technology in offering our expertise and determining our industry’s winners and losers. That was true in the past and will be true in the future.

“And, hopefully, we also recognize that collaboration among us and the resulting enhancement of capabilities it conveys will be essential in meeting society’s growing energy needs,” he concluded.

The penultimate speaker in the first session, **Michael Suess**, a Member of the Managing Board of Siemens AG, in assessing the new global energy trends, pointed out that currently 1.5bn people did not have access to electricity, while another 2bn people would show up on the planet earth in the next 40 years. The existing population would have higher demand for electricity and energy.

“And even if the trends are volatile and the peaks and troughs are getting higher and lower, there is one truth in the long term — global primary energy demand is growing. And global electricity demand is growing,” he said.

In the next 20 years, said Suess, electricity demand would almost double. In 2030, coal, oil and gas together would provide the same amount of energy than all the systems today that included nuclear, hydro and renewables.

“And it is not an ‘if’ fossil fuels and renewables, it is always an ‘and’ because only if we add renewables



Michael Suess

“... even if the trends are volatile and the peaks and troughs are getting higher and lower, there is one truth in the long term – global primary energy demand is growing. And global electricity demand is growing.”

— Michael Suess

to fossil fuels, can we avoid a lack of energy supplies. But what do we install capacity-wise in the next 20 years?”

Suess said that, at the moment, there were 5,800 gigawatts of capacity existing in the world. Over the next 20 years, which represented a challenge and an opportunity, they would have to construct 7,000 GW of power generation equipment.

“That means more than what is installed at the moment. On the one hand it is a real engineering challenge, but it is also an opportunity because we can do it in a very efficient way.

“The challenge is if we do it wrong, we do it wrong for decades, because whatever we invest in power generation, it stays for 30, 40 or 50 years,” he explained.

“If you decide today on a nuclear power plant, you decide for the next 60 years, ten years of which is for construction. If you decide today on a coal-fired plant, you will have it for 40 or 50 years. And if you decide for a gas-fired power plant, you will have it for at least 30 to 40 years.

“So we are deciding for the following generations. Renewables will only account for one-fifth of future energy supply,” he observed.

Suess said that in percentage terms, support from coal would decline from 40 per cent to 25 per cent, but the absolute amount would increase.

“This is not as significant as gas, while nuclear will stay at around six to seven per cent. That means that 400 new nuclear plants have to be constructed over the next 20 years. Today, we have 435 operating worldwide. And they are phasing out 150 to 200 plants,” he stated.

So, said Suess, not one solution fitted all – but only all together.

He said that in China, for example, which was hungry for energy resources, they could not have the luxury of choosing which kind of generation source they want to choose – they needed to take everything that was available.

“And they have to use everything available to boost their economic standing. In the end, a modern society can only exist with skilled people, money available and if you have energy.

“So, we have the resources and we must use these together in the most efficient way,” he maintained.

Suess said that the US and Germany, for example,

had to face the situation that they were powered by 45 per cent of coal-based supply.

“These power plants have to face being phased out because they are not meeting the carbon dioxide requirements in the future. So either you go in with gas, nuclear or renewables to replace them.”

In the Middle East, Suess continued, there was gas and oil, “but you also have to think about renewables because while you have \$100/b oil, it is better to sell it, rather than burn it domestically.”

Oil, he said, continued to be the most valid and most valuable energy source in the world. Oil was storing the highest densities of power.

Suess maintained that most of the new power-generating plants would be based on gas, with some steam and some nuclear, as well as renewables, including solar and wind.

“In the end, we want to leave this society in a way that climate protection can remain and we can handle this world in a way that leaves a planet that people still want to live on.”

He professed that economic efficiency was key to this. “If you don’t have a wealthy society then climate protection does not take place. This is something that history has shown us.

“If we look at gas, this is one of the most promising stories with both conventional and unconventional gas and here we have to act responsibly — that we do not burn that with a wrong perception.

“There are the right ways to explore for unconventional gas and we must take care that we do it in a very responsible way. But in doing that, there is gas for centuries.

“And why is gas essential for electricity? Because a modern gas-fired power plant can be run with almost 61 per cent efficiency and even the possibility of 85 to 90 per cent efficiency with the right process,” observed Suess.

He said it all meant that one reduced CO₂ emissions significantly. And on economic grounds, a gas-fired power plant cost half of that of a coal-fired plant and less than a quarter of a nuclear plant.

“I am reminded of the old saying that with time, money and engineering you can reach anything. But we have to have the right direction. And the direction to go is to have equipment that has the highest efficiency and using even the lowest quality of fuels,” he stated.

“So, in summary, I think there are much more positive opportunities than downside, even if the world today is very volatile, very nervous and very scared.

“But there is the chance, with all the new capacities, to get to do it right. There is not one answer and there will not be a role model from any country.

“But there is a role model for each society with the right portfolio, that resource efficiency comes first and, above all, there is a lot of major enhancement for energy systems with innovative technologies,” Suess concluded.

The final speaker of the first session was **Wang Dongjin**, Vice President of the China National Petroleum Corporation (CNPC), who gave an overview of the global petroleum scene and his country’s energy situation.

He said that remaining recoverable reserves of oil and gas in the world amounted to 1.52 trillion barrels of oil and 191tr cubic metres of gas. These had both increased by 25 per cent over the last ten years.

Quoting US Geological Survey figures, Wang said that in 2011, estimated conventional oil and gas to be discovered globally totaled 937 billion b of oil and 159tr cu m of gas. That was seven per cent and 18 per cent, respectively, more than the estimation in 2008.

Meanwhile, he said, with technological advancement, the exploration and production of unconventional oil and gas had come to reality. Potential resources were much bigger than that of conventional oil in terms of value.

He pointed out that OPEC was a major contributor of conventional oil production growth. Conventional oil production in most non-OPEC countries had reached peak volume and would decline gradually in the future.

It was expected that future supply growth of conventional oil would come from OPEC Member Countries.

The CNPC head said that between 2010 and 2035, the increase in OPEC production was expected to be 14 million b/d. OPEC’s share in global oil supply was in line to increase from the current 40.3 per cent to 45–50 per cent.

“Global oil and gas consumption is moving eastwards, while production is moving westwards,” observed Wang.

He stated that in terms of consumption, it was expected that by the year 2013 or 2014, oil consumption in developing countries would reach 46m b/d,



Wang Dongjin

“Profound changes have taken place in China’s economic structure and the model of development and consumption. China will become more dependent on the international energy market.”

— Wang Dongjin

exceeding that of the developed countries and would reach 62.7m b/d in 2030, accounting for 60 per cent of the global total.

Wang said that in the coming 20 years, 80 per cent of oil demand growth would come from the Asia Pacific area, which would become the biggest gas consumption centre as well.

In terms of production, he continued, the US was accelerating its path towards energy independence. Its dependence on oil imports had decreased from 60 per cent in 2005 to 45 per cent in 2011 and was expected to drop to one-third in the next 15 years.

Wang said the exploration and production of unconventional oil and gas resources, such as shale gas, the oil sands in Canada and the heavy oil in Venezuela, was most likely to support supplies in the Western Hemisphere around 2030.

Concerning China’s domestic oil sector, he said that in the long term, the country’s oil consumption would increase continuously with accelerating industrialization and urbanization.

“Profound changes have taken place in China’s economic structure and the model of development and consumption. China will become more dependent on the international energy market.”

Wang informed that in 2011, China’s domestic oil production stood at about 200 million tons, while its local consumption exceeded 450m t. It was expected that consumption in 2030 would reach, or exceed, 700m t.

“The role of OPEC Countries as China’s main source of oil imports will be further strengthened,” he told the Seminar.

Wang noted that, in recent years, cooperation between China and OPEC had been further strengthened, diversified and expanded.

Firstly, cooperation with OPEC Member Countries had extended into multiple fields. In the past five years, 60–65 per cent of China’s imported oil came from OPEC Countries.

“At the moment, China is cooperating with all 12 OPEC Member Countries, in oil and gas investments, engineering services, petroleum equipment supply, oil and gas trading and technological exchange. Those jointly have been promoting new oil and gas developments in OPEC Countries,” said Wang.

The CNPC head stressed that his company offered

assured comprehensive strength and had an international competitive edge, such as in the Orinoco heavy oil development in Venezuela and in the Iraq post-war bidding rounds and the implementation of awarded projects.

OPEC joint ventures in China were being actively promoted, he stated. National oil companies (NOCs) from China and OPEC Member Countries were in extensive cooperation, examples being the Guangdong refinery project with Venezuela, a petrochemical project with Saudi Aramco, a hydro refinery and petrochemical project with Qatar Petroleum and also a refinery with the Kuwait Petroleum Corporation (KPC).

“With most of these projects, we will start construction this year or next year,” Wang revealed.

Meanwhile, he continued, the cooperation between Chinese oil companies and OPEC NOCs would be further expanded to Chinese oil product marketing.

“The change in the demand/supply structure makes it certain that the link between China and OPEC Countries will grow even stronger. Our cooperation will bring a win-win situation in the long run,” he affirmed.

“China wishes to strengthen its exchanges in the energy sector with OPEC so as to gain a better understanding of each other and to enhance our cooperation,” he concluded.

Below: The historic splendor of the Hofburg Palace in Vienna, which again hosted the OPEC Seminar.



Session Two

Oil and the World Economy

Themes

- Developments in the world economy: lessons learned from the economic crisis
- Impacts of the global business cycle and three-track economic recovery on the world oil market
- The changing paradigm in global economic cooperation and governance (G20, Regulations, etc)



L-r:

Michael Masters, Chairman, Better Markets Inc

Lars H Thunell, Executive Vice President and CEO, International Finance Corporation

Wilson Pastor-Morris, Minister of Non-Renewable Natural Resources, Ecuador

Diezani Alison-Madueke, Minister of Petroleum Resources, Nigeria

Rostam Ghasemi, Minister of Petroleum, Iran

Jaipal Sudini Reddy, Minister of Petroleum & Natural Gas, India



Diezani Alison-Madueke

Chairperson

Diezani Alison-Madueke

Minister of Petroleum Resources, Nigeria

Keynote speaker

Wilson Pástor-Morris

Minister of Non-Renewable Natural Resources, Ecuador

Speakers

Rostam Ghasemi

Minister of Petroleum, Iran

Jaipal Sudini Reddy

Minister of Petroleum & Natural Gas, India

Lars H Thunell

Executive Vice President and CEO, International Finance Corporation

Michael Masters

Chairman, Better Markets Inc

“In essence, the cardinal rule of the oil and gas industry in global economic stability and global security cannot be over-emphasized.”

— Diezani Alison-Madueke

Chairperson for the Seminar’s second session was **Diezani Alison-Madueke**, Nigeria’s Minister of Petroleum Resources. Before introducing the guest speakers, she commented on the oil market situation and the world economy.

Recent developments, she said, would suggest that the global economy was far from being out of the recession that was triggered by the OECD financial crisis of 2007–08.

She noted that as the economy tried to recover, there was some consolidation in 2010, but 2011 presented a somewhat different picture.

“By August of last year, political gridlock in the US triggered for the first time a downgrading of the US credit rating by Standard and Poors,” she observed.

As a consequence, the challenge was posed to policymakers to manage an impending contagion through fiscal discipline and austerity measures, resulting in either economies going into recession, or having a near zero growth rate.

Mrs Alison-Madueke noted that global crude oil demand decreased from 88.8m b/d in the fourth quarter of 2011 to 87.8m b/d in the first quarter of 2012.

Supply also declined — from 88.5m b/d in the fourth quarter of 2011 to 87.8m b/d in the first quarter of 2012.

Due to seasonal demand effects and refineries' turnaround maintenance in various regions, oil demand was higher than supply in the fourth quarter of 2011 by up to 1m b/d, she observed.

That was due to high diesel demand for both the transportation and industrial sectors. The global supply average in 2011 of about 87.4m b/d, compared with 86.5m b/d in 2010.

"This was mainly due to sustained supply from OPEC, South America and the former Soviet Union."

The Minister said that in 2012, economic instability had been heightened by the Greek Euro-zone crisis, triggering bank failures across the global financial system, in addition to the crisis in Syria and the nuclear stand-off in Iran.

"So on the whole, the global economic growth rate is slowing," she pointed out. Growth was projected at about 3.4 per cent for 2012, down from 3.8 per cent in 2011.

"Given this current state of the global economy, I don't think there could have been a better time to hold this Seminar. I think it goes without saying as well that energy today is at the heart of every economic, environmental and developmental issue."

Mrs Alison-Madueke maintained that energy security, in particular, had never been more extricably linked to global security and the world economy as it was today.

Various factors, both indirect and direct, contributed to the need to focus on the oil and gas industry within this particular framework.

"In essence, the cardinal rule of the oil and gas industry in global economic stability and global security cannot be over-emphasized," she professed.

The Minister said there were a few key solutions, including expansion and diversification of supply, a shift towards cleaner fuels, such as natural gas, as well as the leveraging of energy resources, particularly in developing

nations, to fuel more major domestic economic growth, so as to forestall the vulnerability to terrorism, or poverty, or both.

She said it was against this background that most of the oil and gas industry had incurred strategic levers in global economic order and global security.

"I think that, all in all, we have to look at global energy growth demand and increasing concentrations of supply, rising energy costs and national economies, rapidly progressing climate change, food security and the rise in global terrorism."

Before introducing the keynote speaker, Mrs Alison-Madueke told delegates that the session would look at such issues as the correlation of the world economy and oil production and "how we can reduce price volatility, which is always a common negative denominator to both production and consumption in the oil market."

She added: "We will look also at whether the state of the world economy impacts the level of investment in the oil industry and what informs the increase in cooperation and collaboration with organizations such as the IEA, the IEF and OPEC."

The keynote speaker for the second session was **Wilson Pastor-Morris**, Ecuador's Minister of Non-Renewable Natural Resources, who spoke of the challenges facing OPEC and its Member Countries, in the light of the ailing global economic situation.

He pointed out that the present and near future prospects for the world economy remained negative.

The macro-economic environment was still under the effects of the 2008 economic crisis that had affected the majority of the world's economies.

"The recovery continues being slowed by the weakness of the financial sector. The main uncertainty is focused on the Euro-zone sovereign debt crisis. The consequences of this are worsening, particularly for employment and the increasing negative effects on international trade," he declared.

The Minister noted that the US economy had not yet reached the expected healthy growth, while Japan was also struggling to get over a slow recovery.

The emerging economies, which had suffered fewer disruptions in the 2008 crisis, were now also losing their strength, mainly due to the global economic effects.



Wilson Pastor-Morris

“The 2008 crisis is a good example as to how quickly confidence can erode, how contagion can spread throughout the globalized world, as well as how challenging and expensive it is to repair the damage.”

— Wilson Pastor-Morris

The major OECD and European economies were on a decreasing path, while the peripheral countries had also entered into recession.

Pastor-Morris stressed that the expansion of China and India was also slowing down.

Regarding the oil markets, he said they were witnessing a dramatic and increasing shift in the oil paradigm as a result of three major events.

Firstly, he stated, there was a change in the polarity of oil consumption to Asia. This would trigger the main

worldwide hydrocarbons producers, like Russia, to diversify the orientation of their exports.

The Minister observed that, since the middle of the last decade, oil demand from the emerging economies was being enforced by the reduced, stagnating, or weak consumption in the OECD countries.

Meanwhile, China and India were consolidating their positions as leaders of the energy consumers.

The second important issue, he said, was that since the beginning of this century oil had become more and more a financial asset.

This had amplified the upward and downward movements of prices, which had led to increased trade and speculation in the commodity markets, especially the oil markets.

“This has opened a debate, not only on the effects on the high oil price volatility suffered in the last years, but also on the price formation mechanism,” he affirmed.

Pastor-Morris stated that the third issue involved how the US would become self-sufficient in hydrocarbons in the predictable long term.

“There is an important shift in the US, due to its role as an important economic leader. The production and availability of non-conventional oil, like shale gas and shale oil, in the next years will allow the country to be less and less dependent on the global energy uncertainties that could trigger a positive impact in the world economic expansion.”

Additionally, he said, the global energy market was facing other challenges, such as the restructuring of the energy mix in Japan and Germany, due to the nuclear incident in the former.

“There is no doubt we are facing challenging times in the context of an unstable geopolitical environment. Financial restrictions against Iran from the US and Europe are ongoing, although a roadmap for negotiation is still open.

“Japan, India, South Korea and other countries are maintaining their oil imports from Iran. However, a latent risk of disruption in Iran’s oil supply remains at an elevated level.”

On the other hand, said Pastor-Morris, since 2011, Iraq’s oil production had increased, it being one of the countries with the largest future growth of conventional oil production that had not yet reached its full potential.

“Certainly in the Middle East, geopolitical tensions related to oil supply have diminished. However, the political struggle in Syria is worsening with unpredictable consequences for the regional and global environment,” he stated.

The Minister said that at the OPEC Conference in December 2011, OPEC had decided to maintain crude oil production at 30m b/d. Non-OPEC crude oil production was at around 53m b/d.

OPEC Members also decided that, if necessary, the Organization would take steps to ensure market balance at reasonable price levels. At present, OPEC’s crude oil supply had reached 31.6m b/d, exceeding OPEC demand for crude. Inventories had increased to 60 days of supply in the OECD for the first quarter, causing a reduction in spare capacity in OPEC Member Countries from 5.2m b/d to 3.6m b/d, generating uncertainty about the overall supply cushion.

Pastor-Morris said that, on the demand side, this year OPEC estimated a slight increase in global oil demand of 800,000 b/d.

In the future, he maintained, the prevailing macro-economic uncertainties would continue affecting oil demand until the economic contraction in the Euro-zone was overcome, as well as the effects on global international oil trade.

“Although in the short term, we face a precarious economic situation with weakening oil demand growth, in the medium to long term the scenario of the fundamentals of oil supply remain strong, as forecast by the main international organizations and oil companies,” he observed.

The Minister said that OPEC’s latest World Oil Outlook (WOO) showed that energy demand between 2010 and 2035 was expected to increase by more than 50 per cent, while oil would retain the largest share of energy type with 28 per cent of the energy mix.

“Concerning the price performance, we have observed over the past 12 years, with the exception of 2009, that there has been continuous growth in oil consumption and production, sustaining and increasing prices in real terms.

“This is mainly explained by the emerging growth of the major Asian economies.”

Pastor-Morris noted that some analysts tried to explain the rise in prices by the eruption of the financial

markets, when in fact, in the context of growing world demand, the oil price reflected mainly the growing cost of exploration, development and production for new petroleum discoveries.

In line with the increasing costs, one of the most important questions for steady future oil prices was the industry’s capability to allocate substantial investment requirements, he said.

Just for the upstream sector, the OPEC Secretariat estimated spending of over \$3 trillion in the next 25 years to secure the required increase in the production of conventional and non-conventional oil.

“Otherwise, we will return in the mid term to price volatility cycles,” the Minister said.

He said that one lesson to be learned from the economic crisis, when oil prices fluctuated from \$147/b to \$30/b in just a few months in the summer of 2008, a situation that was amplified by the effects of the oil financial markets, was to avoid the aggravation of the downside of the economic cycle, which had devastating consequences on producers and consumers.

“In the first five months of 2012, we faced imbalanced periods of oil supply and oil demand and price volatility.”

The Minister observed that the first quarter of this year had been characterized by an upward movement in oil prices, based on optimistic data in the US, the US dollar’s weakness and geopolitical events.

“This situation has been reversing since late April under the perception of weakening world demand, based on the effects of the European crisis and real access to oil supply, leading to a level of oil price last seen in December 2011,” he stated.

In the past decade, he said, the impact of the rising costs of oil on GDP was quite different in countries where the economy was growing healthily, than in countries where the economies were stagnated by the financial crisis.

“If we take the G7 countries, the growth was not so severely affected as a whole by the rise in oil prices, in contrast to the impact on the OECD and the European economies, which have weak GDP growth,” he explained.

Pastor-Morris said the recent International Monetary Fund 2012 working paper on the future of oil geology versus technology forecast some limits on oil prices in the world economy.

“This paper states that assuming estimated steady

world growth equal to four per cent, the average annual growth rate of real oil prices at which the model assumes zero effect on output growth is seven per cent.

“The major challenge is to achieve steady GDP growth. But for the time being, the producers are facing an unstable situation concerning the level of supply in 2012.

“The 2008 crisis is a good example as to how quickly confidence can erode, how contagion can spread throughout the globalized world, as well as how challenging and expensive it is to repair the damage.

“We have learned that we still have a long way to go to preventing crude oil shocks and volatility.

“Instead of reacting to them, there is a lot of room to improve the oil market scenario in key basic ways, to achieve transparency and global cooperation, to better understand both the causes and effects of volatility, enabling us to reduce its lasting effects on the economy and the people.”

Pastor-Morris said that in respect to the technical crisis, the financial crisis and commodity price volatility, at the end of last year the G20 had taken steps to “improve the other side” of the financial and energy-related markets, by increasing transparency, by enacting legislative reforms and by deciding on establishing position limits on traders.

He said it was good for his country, Ecuador, to be part of the reinforcement of the trilateral cooperation of the IEA, the IEF and OPEC, in order to improve supply and demand reliability through comprehensive data collection.

“In this way, we can enable global policies to ensure that future investment can be boosted in the energy sector. We are all committed to achieving a stable and predictable energy market landscape, in which OPEC will continue to play a determining role.

“Transparency and cooperation enhances security of supply and demand and price stability also requires an affordable price for the consumers, with prices that can fuel prosperity for the developing producing countries,” the Minister concluded.

In stressing the importance of petroleum to global economic expansion, **Rostam Ghasemi**, Iran’s Minister of Petroleum, also spoke in his address about the damaging effects of speculative activity in the commodity markets, especially oil. He stated that, in past years, the



Rostam Ghasemi

“It is evident that the price of oil is sensitive not only to economic factors, but also to other factors, including geopolitics.”

— Rostam Ghasemi

world had faced different economic crises, the last being the economic crisis of 2008.

“When a crisis sets in, many politicians and even some economists point their fingers to oil prices and to the oil producers, especially OPEC Member Countries,” he declared.

At the same time, other economists also studying the causes of economic downturns came to the conclusion that they were rooted in the major industrialized countries’ monetary, financial and banking policies.

“Here of course, time constraints do not allow for a review of the current political and economic thoughts related to the impact of the oil price, but we all know that the energy sector, especially oil, is the main engine of economic growth and development, through its ties with all sectors of the economy.”

Moreover, said the Minister, economic growth, social welfare and rising demand for energy were also very closely interrelated.

He maintained that over the past several decades, consumers had done their utmost to reduce energy intensity in GDP. Energy intensity had fallen dramatically from 2.71 barrels per capita in the early 1970s to 0.9 b nowadays.

“That process is underway in the developed economies, in particular, but also in the emerging economies.”

Ghasemi said that, at a steeper pace, energy intensity had fallen in the developing countries from 9.68 b to the low of 2.06 b today, which was, of course, still very high compared to the figure of the 1970s.

He pointed out that in addition to the enhanced energy efficiency and energy intensity consumers were also diversifying their supply in the light of environmental considerations.

“However, despite consuming country efforts to reduce energy and oil consumption in recent years, the world economy has witnessed a major shift from the resultant rise in economic growth in the emerging economies.”

For example, said the Minister, the share of developing countries in world economic growth had increased from 20 per cent in the 1990s to currently stand at 65 per cent.

“Moreover, because of a structural change in most developing countries, especially India and China, which have moved from agricultural to industrial economies with rising urbanization, there has been strong growth in transportation and increasing per capita energy consumption and growing demand for oil.”

Ghasemi noted that most experts were of the opinion that even though energy intensity was falling in many countries, including China, if economic growth continued at the levels seen in 2000 and 2011, rising demand for energy and oil would continue, leading to higher oil prices.

“On the other hand, due to increasing globalization and wider international trade, the economic growth risk of one region may spill-over into other regions, affecting not only the world economy, but also the commodity and oil markets, as well.”

The Minister said the most tangible example of this was the crisis in the US banking system in 2008, which affected other regions’ financial systems, leading to a deep world economic recession.

“That crisis adversely affected commodities and the oil market and, as a result, the oil-exporting countries and their revenue suffered a lot.”

Ghasemi said that through government intervention and various financial and monetary packages, economies were brought back under control.

And, at the same time, OPEC’s adoption of suitable policies brought stability to the oil markets.

The Minister observed that in 2010, the world economy improved with growth of 4.9 per cent, a situation that also increased the price of commodities, including oil.

In 2011, the sovereign debt crisis in Europe led to a relative fall in the world economy and, as a result, commodities and oil were expected to drop, but instead the political crisis in the Middle East pushed prices up.

“It is evident that the price of oil is sensitive not only to economic factors, but also to other factors, including geopolitics,” Ghasemi pointed out.

At the same time, the monetary policies of the industrialized countries had increased speculative activity in commodities and changed the pricing mechanism.

He said the international oil market nowadays was not only affected by the fundamentals, it was also sensitive to developments in a speculative form.

“It is evident that the growth of investment in the commodity markets will increase market volatility, which adversely affects investment in the oil sector, as well as impacting the world economy, especially the economies of the oil-exporting countries.

“Therefore, the adoption of prepared monetary and financial policy, as well as a reduction of political influence and involvement in the commodity markets, is essential for world economic growth.”

Ghasemi stressed that, under the current economic and financial circumstances, it was unfortunate that the imposition of sanctions on Iran, the second-largest OPEC oil producer, was being considered by Europe, a situation that enhanced the intrusion of politics in the market and boosted speculation.

“Certainly, this politically motivated approach will damage the stability of both the oil market and the world economy,” he professed.

The Minister told delegates that throughout history, political, monetary and economic issues had been inter-related constantly, especially concerning energy policy by the major consuming countries.

This situation, he continued, was started in the past and was continuing in the present. It had created an uncertain future for both oil demand and the economies of the oil-exporting countries.

“The use of instruments such as sanctions or direct military intervention in the energy-producing countries will increase the price of oil and market volatility,” Ghasemi warned.

“Such intervention will distort supply development and the exports of certain producers.”

The Minister said his country shared the opinion that a sufficient and sustainable supply of energy would ensure the stability of the world oil market.

“And sustainable energy supply calls for political and geopolitical stability. Under the shadow of economic sanctions and military intervention, the trend of oil production will not continue to meet the expectations of both producers and consumers,” Ghasemi observed.

He noted that, in the past, consuming governments used to stress that force would not be utilized as a tool for imposing pressure on other countries.

“But today we are witnessing unilaterally imposed sanctions on a producer that certain consumers are using as a means to attend to a political objective.

“They are imposing constraints on oil and this will result in an unstable oil market and ultimately lead to sharp swings in the price of crude oil, which is vital to economic growth.

“We also believe that energy policy should not focus purely on the issue of substitution of enhancing energy efficiency, reducing the share of oil for the household energy consumption basket and increasing national revenue via discriminatory taxation on fossil fuels, especially oil.”

Ghasemi said policy should rather concentrate on tackling challenges, such as establishing financial resources for new industry products, enhancing security, minimizing obstacles, removing political tensions in the oil-producing countries and finding ways to limit the influence of speculation, while regulating activities.

“Now the time has arrived that instead of emphasizing unilateral discriminatory and unjust policies, we should concentrate more on fundamental issues, such as reducing geopolitical tensions, removing political pressure and economic bottlenecks, as well as sanctions.

“There is no doubt we all need to return to eco-

nomic logic, peace and stability, respect for international law, ensuring financial resources investment risk, reducing and facilitating the free flow of technology into producing countries and ensuring unhindered access to them.

“Under these circumstances and with a rising capacity increase, long-term energy security and a suitable economy will materialize,” the Minister concluded.

Looking at the global economic situation from the vantage point of an emerging economy, **Jaipal Sudini Reddy**, India’s Minister of Petroleum and Natural Gas, told participants that they were meeting during difficult times, a fact rightly and repeatedly emphasized by other Seminar speakers.

He stressed that the Eurozone crisis, the continuing recession in the global economy, rising geopolitical tensions, a sustained phase of high volatile international oil prices, as well as extraneous factors, continued to influence the price formation of oil.

“All these pose serious challenges to the health of the global economy and stability of the world’s financial system,” he warned.

The Minister stated that the current global financial crisis had lasted longer than anyone thought in 2008 and was undoubtedly the greatest threat faced by the world economy since the Great Depression eight decades ago.

“Since India is the world’s fourth-largest net importer, I am talking today from the perspective of an emerging economy.

“We are all agreed that oil prices particularly affect global economic performance. In oil-importing countries, like India, higher international oil prices lead to domestic inflation, increased import costs and an increase in the budget deficit.

“It invariably drives up interest rates and slows down economic growth. Higher oil prices raise the cost of fertilizers, hence the cost of food, thus hitting hard the poorest economies and the poorest within those economies,” he affirmed. Reddy said that net oil-importing countries experienced deterioration in their balance of payments, putting downward pressure on exchange rates.

As a result, imports became more expensive, exports less valuable, leading to a drop in real national income.

“There could not be a more direct cause and effect



Jaipal Sudini Reddy

“It is a highly interconnected, interdependent world and we must swim or sink together. Let the producing and consuming countries work together to build trust, share market data to establish demand certainty, and instill confidence in the oil-producing countries to undertake the required investments to produce larger quantities of incremental oil and gas.”

— Jaipal Sudini Reddy

relation than oil prices retarding economic growth of the oil-importing countries,” he maintained.

The Minister said that between the financial years 2010–11 to 2011–12 India’s annual average cost of imported crude oil increased by \$27/b, making the country’s oil import bill rise from \$100 billion to \$140bn.

“Further, since we could not pass on the full impact of high international oil prices, we had to shell out subsidies to the consumers, amounting to \$25bn.”

Reddy said it was estimated that a sustained \$10/b

increase in crude oil prices led to a 1.5 per cent reduction in the GDP of developing countries.

“We have seen evidence of this in our own country. India’s GDP grew by 6.9 per cent in the last financial year, down from the eight per cent plus growth rate experienced over the previous few years,” he observed.

The Minister stated that if one surveyed current literature on oil prices and the global economy, one could discern two schools of thought.

“One school holds that the global economy has built up enough resilience to absorb oil price hikes, due to stronger demand from the emerging economies, as well as more enlightened central bank policies.

“The other school of thought is categorical that high oil prices are one of the primary reasons for the weak conditions in the economies of the US and Europe.

“We subscribe to the latter view and hold that very high, volatile oil prices will continue to weaken global efforts for an expeditious recovery from the ongoing global economic recession and financial crisis,” he affirmed.

“In this august gathering, I can but highlight the dual role that crude oil now plays both as a physical commodity and as a financial asset and the need to improve our understanding of the inter-linkages between the physical and the financial markets.”

Reddy said there were a few questions he would like to pose:

“Is the price discovery of oil today an outcome of the economic fundamentals of demand and supply, or are there extraneous factors at play?

“If oil has such a large impact on the health of the global economy, can we afford to leave the price discovery of such a vital and finite resource as oil entirely unregulated in the commodity derivative markets of the financial markets?

“Are the oil futures markets adequately performing their functions of price discovery and risk transfer?”

He said that for the oil-importing countries, these questions needed to be squarely addressed, “if we are to address the challenges of global energy security.

“We are enthused by the G20 to strengthen the regulation of oil futures markets and trade in paper barrels. Such a move pursued to its logical end will render oil markets less opaque, dampen volatility, and provide the much-needed stability and predictability in oil price formation.

“It is our belief that excessively high volatility in oil prices benefits neither the producing countries, nor the consumers. In fact, they lead to demand destruction in the consuming countries, thereby inhibiting fresh investments by the producing countries, leading to vicious cycles of higher prices and falling supplies,” maintained Reddy.

He reminded the audience that the global population was projected to increase to 9bn by mid-century and that providing easy access to energy at affordable prices and in an environmentally sustainable manner was the major challenge that confronted policy planners today.

“We all agree that oil and gas will remain the dominant fuel in the world’s energy mix until 2030.”

Reddy said the question critical to the world economy was: “Are we making sufficient investment for ensuring the production of the incremental quantities of oil and gas required in the days ahead?”

The answer to that question, he said, must necessarily be in the affirmative if the global economy was to be in sound health.

“Unless we understand the strong linkage between oil price stability and the overall health and stability of

the global economy, we will not be able to come up with a prescription for a quick recovery,” he asserted.

“It is a highly interconnected, interdependent world and we must swim or sink together. Let the producing and consuming countries work together to build trust, share market data to establish demand certainty, and instill confidence in the oil-producing countries to undertake the required investments to produce larger quantities of incremental oil and gas.

“Let us reduce the influence of extraneous factors in oil price formation and gain greater transparency and predictability in the international oil markets. By doing so, we will be contributing our bit for an early recovery in the global economy,” the Minister concluded.

In giving an overview of the state of the world economy and the prognosis for the future, **Lars H Thunell**, Executive Vice President and Chief Executive Officer of the International Finance Corporation (IFC), told the Seminar that high oil prices were both good and bad for developing countries.

He revealed that the World Bank, in its latest forecast for the world economy for 2012 and 2013, predicted a reduction in the growth rate for 2012 to 2.5 per cent and to 3.5 per cent for 2013.

“The situation we have seen after the US financial crisis in 2008 has been a multi-polar type of growth model, with the emerging markets driving economic growth,” he explained.

Thunell pointed out that in 2011, some two-thirds of global growth was as a result of the emerging markets, especially the middle class, who were now driving those economies.

“I think we are in for a very volatile situation where we all have to work very closely together to make sure that the poorest people in the world are not really being hurt by the current economic developments.”

— Lars H Thunell



Lars H Thunell

“Unfortunately, the malaise in Europe is spreading through various transmission mechanisms to the emerging markets. We see it in terms of trade, in terms of remittances and we see it in the financial area, where banks are pulling back,” he affirmed.

Thunell maintained that, today, volatility in oil prices and its interrelationship with world economic growth and the uncertainty surrounding this had become one of the drivers of the world economic situation.

From a World Bank perspective, the effect high oil prices had on the developing countries was a major issue for the institution.

“We see the effects higher oil prices have on the budgets of especially the poorer countries — on their investment programmes and on individuals,” he stated.

Thunell said that especially when the price of crude reached over \$60 a barrel, the correlation between food prices and oil prices became higher and higher.

“So it is not only the effects of the oil prices, but also the effects of food prices that are really impacting people in these countries.”

He said that, year-to-date, food prices had risen by about eight per cent. “So this is creating a real problem.”

But Thunell pointed out that, at the same time, the higher oil prices had created many opportunities for the developing countries.

“We are seeing a number of new explorations and new oil and gas finds in Sub-Saharan Africa, for example. So the big questions are: Is this going to be a blessing or a curse for these countries? Are the benefits from this new oil going to be really felt? Will there be fair distribution to the citizens of the countries and how do we create a good balance between foreign investors and local companies? How do we get energy for all?”

Thunell maintained that South Sudan was a very good example of these issues. They had oil, but they had no way of getting it out of the country today, except by going through Sudan, which was not exactly friendly.

“Less than one per cent of the population in South Sudan has any access to electricity. We have helped them over the last two years, but it is really a question of how they build their capacity to handle the challenge of making sure that the oil there will benefit the country.”

Thunell stated that the World Bank tried to take a balanced role and ensure a fair distribution.

“We very much believe in the extractive industry

transparency initiative — having transparency of what is actually happening with the money and seeing who gets what.

“We try to create linkages, to create small and medium enterprises that can actually deliver into the projects. It is also important that when we talk about development, we do not forget about sustainability.

“If we build power plants for example, we are locking in a technology for the next 50 years, working with the best technologies, working with renewables and energy efficiency. Even in poor countries it is important.

“For example we have worked with the Chinese authorities on energy efficiency and a programme through the banks for financing small investments in energy efficiency.

“The savings today are estimated at the equivalent of 30 medium-sized nuclear power plants. That is what energy efficiency can do for you.”

Thunell said that another issue today that was a fall-out of the financial crisis, first in the US and now in Europe, was a lack of financing.

“Projects are getting bigger. And not only do we have to finance the actual natural resource extraction, but more and more we are seeing that up to 50 per cent of the projects are about infrastructure, getting the commodity out through pipelines and railroads etc.

“So the financing needs are immense. And today we have the credit crunch affecting many parts of the world, coupled with the high cost of dollars, and we see European Banks de-leveraging and pulling out. In the first quarter of this year, this amounted to some \$500 billion.

“We see them pulling out of trade finance, because they do not want to get involved. This, again, is hurting very much the poor countries who need letters of credit to finance their imports and exports.”

Thunell observed that with the high prices for commodities and the reduction in financing, “we see they are getting really squeezed. We are seeing countries now not even being able to import the essentials. This is somewhere that we need to have new innovations, public and private partnerships, and working with institutions like the IFC.”

Today, the IFC was involved in project finance, corporate finance, equity finance, and trade finance. Over the last five to six years, the institution had gone from investment of around \$7 billion a year to about \$20bn annually.

“We have also shifted and today about 50 per cent of our projects are in the poorest countries. We also work with the World Bank on capacity-building.”

Thunell told delegates that the IFC was already working closely with the OPEC Fund for International Development (OFID).

“We recently started something called an ‘Asset Management Company’, where we take sovereign wealth funds and invest those in equity projects in the poorest countries.

“And we have managed to get a 20 per cent return on equity. That is a way we are moving forward in Africa.

“I think this is one way where OPEC could help in recycling the petro-dollars to the poorest of countries.

“I think we are in for a very volatile situation where we all have to work very closely together to make sure that the poorest people in the world are not really being hurt by the current economic developments.”

Thunell concluded his address by stating that, at the same time, they should create a good base for the future, in terms of investment climate and with a fair share of the benefits of projects.



Michael Masters

The final speaker of the second session was **Michael Masters**, Chairman of Better Markets Incorporated, who described himself as a hedge fund manager who, over the years, had studied money flows. In his address he spoke freely on the intricacies of the global money markets, including the role of money in the crude oil derivatives markets.

He said it was imperative to understand the world of money in markets, because, after all, money was what moved markets.

“The financial markets are complex and it takes someone with financial market expertise to advocate on behalf of the public, because in many cases they are not sure what to advocate on,” he observed.

Masters maintained that markets really could be better. They needed to be more transparent, they needed more regulation, they needed accountability and oversight and the idea was for markets to represent the public’s interests.

“After all, the markets are made of human beings, human beings have flaws, and it is imperative that we look into the markets and we understand that, in fact,

“It is imperative to understand the role of the large institutions and their activities in the financial markets. The reality is that liquidity is like aspirin – if I take two, I get one effect, but if I take the whole bottle, I get another effect.”

— Michael Masters

markets are just human creations and they need to be addressed as such.”

He said that, hopefully, by making better transparency, “we can benefit the entire public on market structure.”

Masters pointed out that in the global financial markets, there was a buyer for every seller and a seller for every buyer in any transaction.

“That is the only function a market really has — to match buyers and sellers. And the way markets do this



Question time at the end of the second session, with moderator, John Deferios.

is via price. So markets move up and down via the price function and they match buyers and sellers. And that is the same with commodities.”

Masters explained that even though in commodities derivatives one could create an infinite amount of futures contracts, one could only create a finite amount at any given price. “After that, the price must move and that is the issue we are all dealing with here — the price movement. So, in the commodities markets, just like any markets, money matters, because that is what moves markets.”

Concerning West Texas Intermediate (WTI), the American benchmark crude, Masters said that in 1995 open interest for this oil blend was about half a million contracts and it stayed at that level for many years. But in 2004–05, the number spiked upwards to around 4.5 million contracts.

“In this year, we saw that large pension funds and institutions put money into the commodity markets, because at that time they had historically high equity allocations and there were not any alternatives to speak of,” he stated.

“They were looking for an alternative, a place where they could get equity-like returns, without correlation.

They were looking for an uncorrelated asset that could grow and had performance.”

Masters continued that in 2008, as a result of the financial crisis, these pension funds and institutions closed out their contracts.

“In fact, nearly \$100 billion, of which 70 per cent was crude oil and its derivatives, came out of the market in the space of about three or four months as people closed their commodity index positions, because they were concerned about the counterparty risk embedded in their commodity index swaps.

“And so we saw this huge inflow of investment capital from institutional investors. We then saw it go into other areas. The problem with this is that in the search for non-correlation, companies and institutional investors have ended up driving correlation.”

Masters said that according to US Commodity Futures Trading Commission (CFTC) data, in 1996 around seven per cent of open interest was in WTI crude oil. Today, 63 per cent of crude oil contracts were held by speculators and only a third by hedgers.

“This means that, increasingly, the pricing determinations of benchmark crude oil contracts are more and more driven by the inflows and outflows of institutional



Libya's Minister of Oil and Gas, Abdurahman Benyezza, speaks to journalists at the Seminar.

investors and speculative forces, versus traditional supply and demand — the way it used to be,” he affirmed.

Crude oil was now linked to the equity markets in many ways. This meant that if there was a bull market in equities, there would be a bull market in crude oil as well.

“The problem with that is that the crude oil bull market ends up becoming a brake on economic growth. Then crude oil falls and the equity markets fall and everything is linked together. That is a very significant problem,” highlighted Masters.

“And if they are linked together, how can we have an equity market that is reasonable?” he asked.

“Once the correlation breaks, you will know that financialization is no longer an issue, but as long as it is there, it is a big problem,” he maintained.

Masters noted that markets used to be in backwardation for about two-thirds of the time and in contango for the other third. Today those had been reversed. Almost 70 per cent of the time today the markets were in contango.

“The reason for this is that we have these enormous amounts of money that are constantly rolling every month and where you have to sell one contract and buy the next contract, which helps force us into contango.

“The problem, of course, is that when you get invalid


price signals, price signals that are predicated on financial flows instead of supply and demand, then you get resource distortions, because financial flows are fickle.”

Masters said it was imperative to understand the role of the large institutions and their activities in the financial markets.

“So what can we do about this issue? First we should have a comprehensive position limits regime. An adequate level of speculation is roughly about 25 per cent of open interest in the futures markets,” he suggested.

“The reality is that liquidity is like aspirin — if I take two I get one effect, but if I take the whole bottle, I get another effect.

“The idea is to have enough speculative liquidity to provide for the primary constituency of the markets, which is the hedgers, the most consumers of these markets, and the suppliers, but not to have so much liquidity where we have price formation that is damaged, which has been the case recently.”

Masters said they already had an effective position limits regime in the US, “which I think will be helpful, but we need Europe to go along and match that. So it is imperative that governments in Europe introduce a strong position limits regime,” he concluded. 

Session Three

Capacity Expansion and Investment

Themes

- Capacity expansion plans and investments (managing spare capacity)
- Uncertainties in demand and their impacts on upstream investment decisions
- Strengthening cooperation between NOCs and IOCs: challenges and opportunities
- Challenges facing oil companies: upstream and downstream (oil prices, fiscal regimes, project costs)



L-r:
 Gerhard Roiss, CEO, OMV AG
 Abdurahman Benyezza, Minister of Oil & Gas, Libya
 Mohammed Bin Saleh Al-Sada, Minister of Energy & Industry, Qatar
 Mohamed Bin Dhaen Al Hamli, Minister of Energy, UAE
 Dr Falah J Alamri, OPEC Governor for Iraq, on behalf of Abdul-Kareem Luaibi Bahedh, Iraq's Minister of Oil and President of the OPEC Conference
 Paolo Scaroni, CEO, Eni



Mohamed Bin Dhaen Al Hamli

Chairperson

Mohamed Bin Dhaen Al Hamli

Minister of Energy, UAE

Keynote speaker

Mohammed Bin Saleh Al-Sada

Minister of Energy & Industry, Qatar

Speakers

Dr Falah J Alamri

OPEC Governor for Iraq, on behalf of Abdul-Kareem Luaibi Bahedh, Iraq's Minister of Oil and President of the OPEC Conference

Abdurahman Benyezza

Minister of Oil & Gas, Libya

Paolo Scaroni

CEO, Eni

Gerhard Roiss

CEO, OMV AG

“OPEC has a longstanding commitment to the international community to keep the oil market well supplied at all times.”

— Mohamed Bin Dhaen Al Hamli

Mohamed Bin Dhaen Al Hamli, Minister of Energy of the United Arab Emirates (UAE), who chaired the third session of the Seminar, said in his remarks that the importance of the session's theme of capacity expansion and investment could not be over-emphasized.

In this regard, he said, “OPEC has a longstanding commitment to the international community to keep the oil market well supplied at all times.”

Speaking specifically about the UAE, he pointed to the country's ongoing efforts to support stable oil markets by ensuring continued and constant energy supplies to its global energy consumers.

Over the last few years, the Abu Dhabi National Oil



Mohammed Bin Saleh Al-Sada

“So, in a crisis, be aware of the danger, but also recognize the opportunity. The recent global economic crisis has opened up windows of opportunity for the emerging countries to develop their resources and make significant economic contributions to the world economy.”

— Mohammed Bin Saleh Al-Sada

Company (ADNOC) had embarked on an unprecedented investment programme across the entire value chain.

“The company has invested billions of dollars in projects, onshore and in offshore oil fields, with the aim of increasing the long-term sustainable production capacity,” he stressed.

ADNOC and its group companies were also investing heavily in developing new gas fields, with the aim of supplying domestic needs.

In parallel, said the Minister, the UAE was developing complementary domestic energy sources, such as nuclear and renewables.

“By expanding our gas production and diversifying our domestic energy mix, we can maximize the amount of oil that is available for export at a time when our economy is growing at a very fast rate,” he explained.

“Of course, crude oil exports are the mainstay of our economy, but we are also increasing our domestic refining capacity to supply global markets with refined products and thereby retain a greater proportion of the value chain,” he informed Seminar delegates.

Al Hamli pointed out that the UAE currently had dozens of major projects underway, requiring not just heavy financial commitment, but also project management and technological expertise.

“We have a long tradition of partnering with international oil companies (IOCs) and for many of these projects we are working closely with the IOCs.

“This is a win-win relationship in which technology transfer and capacity-building are major benefits for the national oil company.”

The Minister said that despite the current uncertainties in the global economy and the questions over future energy demand growth, the UAE was committed to its investment programme.

Other producing countries were also committed, he concluded.

In delivering the keynote address of the Seminar’s third session, **Mohammed Bin Saleh Al-Sada**, Qatar’s Minister of Energy and Industry, drew attention to the dangers associated with an economic downturn, but also highlighted the opportunities it presented.

He reminded delegates that the world was still recovering from its largest economic crisis.

Difficult economic and bailout decisions had been taken very recently by governments and regional economic consortiums in Europe, the US and also in China. And there could be many more in the offing.

At the same time, he said, the price of oil had come down from \$128 a barrel in March this year to under \$100/b. This reflected the extent of the uncertainty and the bearish phase of the current global economy.

“Under such circumstances, it is a daunting task to

contemplate a steady stream of investments in oil capacity expansion, based on oil price alone,” he affirmed.

“The paradox is that the world energy needs are growing and meeting these needs is a prerequisite to coming out of this economic crisis. We, therefore, have to look at the bigger picture and see how we can meet this challenge.”

Al-Sada maintained that crisis in any form was not absolute. It brought along with it many opportunities.

“So, in a crisis, be aware of the danger, but also recognize the opportunity. The recent global economic crisis has opened up windows of opportunity for the emerging countries to develop their resources and make significant economic contributions to the world economy.”

The Minister noted that a restructuring of the world economy was at work and this included the oil and energy sectors, in which non-OECD countries would play a key role in redesigning the energy flows in the world.

“It is therefore pertinent that energy stakeholders, particularly the oil and gas producers and companies, carefully comprehend the emerging dynamics of the industry and align their investments to adapt to this new reality,” Al-Sada asserted.

He stated that it was becoming increasingly evident that non-OECD countries were expected to enjoy a previously unknown level of prosperity over the next 25 years. The revenue per capita should more than double in this period.

The Minister pointed out that increasing disposable income in those countries would lead, among other things, to demand for greater mobility and passenger transportation.

Referring to figures contained in the latest OPEC World Oil Outlook (WOO), he said that there were only 28 cars per 1,000 persons in China in 2008. That number was forecast to increase to 194 cars per 1,000 persons by 2030.

“Altogether, over this period, emerging economies will add worldwide over 600 million new cars.”

Al-Sada said that between 2008 and 2035, 92 per cent of oil demand growth would come from the emerging countries.

“This means that oil demand from these countries will be far more resilient and strong over the next decades than what has been witnessed up until now.”

He said that to meet this growing demand the energy

industry needed to invest in new capacity and field developments, while keeping in mind the cost of production.

“Tomorrow’s production level will therefore be determined by the investment decisions we make today.”

The Minister stated that while considering investment in energy capacities, it had to be borne in mind that besides oil the development of natural gas and LNG capacities would become necessary to balance the world’s energy equation.

As per most recent projections, he said, demand for natural gas would rise by more than 60 per cent from 2010 through 2040.

“At this rate, it will grow fast enough to overtake coal for the number two position behind oil.”

Al-Sada said the International Energy Agency (IEA) had estimated that the cumulative investment needed in oil and gas supply infrastructure was estimated at \$19 trillion over the next 25 years. Of this total investment, more than 60 per cent was expected to take place in the non-OECD world.

Natural gas was expected to receive a share of investment equal to that of the oil industry, demonstrating its increasing role in the energy equation.

The Minister said that as the largest holder of oil reserves in the world, OPEC had the responsibility to maintain and reinforce its pivotal role to stabilize the physical oil market between the boom and bust cycles in the oil industry.

“The challenge is not only the size of investment, but also whether these projects support sustainability. After the COP17 meeting in Durban, it has become evident that a lot of work remains to be performed before any collective international response to climate change is agreed,” he affirmed.

“This includes the development of technologies that will allow us to mitigate greenhouse gas emissions and adapt to the impact of climate change for supporting sustainable development,” he added.

Al-Sada stressed that Qatar had actively participated in many initiatives for sustainable development. It had hosted the 13th UNCTAD Conference on sustainable economic development in April this year and was scheduled to host the next UN Climate Change Conference (COP18) in Doha in November.

“We have embarked on the practical implementation of sustainable development initiatives, such as flare gas

recovery at our Al-Shahin oil field. This project represents a tangible reduction of gas flaring by processing it and also reinjection into the field,” he informed delegates.

Al-Sada said it was quite evident that fossil fuels would continue to be the centrepiece of the energy equation for several decades to come. They were expected to continue to meet about 80 per cent of the world’s energy needs in 2040.

Within fossil fuels, he said, natural gas, owing to its cleanliness and flexibility, would play a practical and important role in meeting both its energy and environmental objectives.

“For this reason, I believe that policymakers will be required to give even more emphasis to the sustainable development of fossil fuels,” he professed.

The Minister said that besides its individual commitment and efforts, Qatar was associated with other OPEC Member Countries to advocate responsible stewardship of the environment and to support comprehensive, fair and realistic efforts to reduce the environmental impact of global energy use.

“Investment in sustainable oil and gas projects takes me to another key challenge and that is the development and application of modern technologies and innovations in the oil and gas industry,” he told the Seminar.

Qatar, he continued, had achieved an incredible expansion of its LNG industry.

“These advances encompass our embracing important innovations and modern technology all along our development over the last decades.

“Across the entire value chain of natural gas, we have used innovative technology to scale up the LNG trains and to design the world’s largest LNG carriers. We have also built a completely new LNG business model, which has made Qatari LNG a truly global business.”

Today, said Al-Sada, Qatar could sell LNG in every region of the world and could adjust its sales mix to match market requirements. Technology and business innovation had also allowed the country to build a unique gas-to-liquids industry with mega GTL projects.

He stated that when it came to the application of modern technology, particularly by OPEC Member Countries, he wanted to highlight the importance of collaboration between international oil companies (IOCs) and the national oil companies (NOCs).

The IOCs had developed the new technology and

know-how for the sustainable development of energy. Their focus had shifted from being producers to productivity improvers.

“This is reflected in the tone of the current arrangements between the IOCs and the NOCs. They are now partners in their pursuit of the development of efficient and sustainable energy sources,” he maintained.

Such technology alliances, he continued, would help the oil and gas industry speed up research, prototyping and piloting new technologies, while achieving the common goals of economic and social development.

“I welcome the opportunity to create a dynamic network of research centres to take advantage of the human ingenuity in the field of energy and the environment,” said Al-Sada.

He stated that when considering challenges with regard to investment and capacity expansion, “we also have to look at certain other factors, erstwhile considered distant uncertainties. Today, they are at the threshold of becoming a reality. I am referring to the shale gas revolution.

“That is introducing the US to a new era of energy abundance. The national expansion of the US shale gas revolution is set to transform the global natural gas industry.”

Al-Sada said a related question was, could such a game-changer even happen in the oil industry too? The answer was yes, it could.

“If we look at the growing technological advances in producing tight oil from low permeability reservoirs, oil production from the US Bakken play is expected to jump from 500,000 b/d currently to over three million b/d by 2020. Such results could be reproduced in many mature basins worldwide,” he contended.

“To what extent, what cost and the pace tight oil will be developed is yet to be seen. But it suggests that advances in technology have and will continue to transform the outlook for the oil industry,” added Al-Sada.

He stressed that during the present economic crisis, OPEC Member Countries and the IOCs had the responsibility to lead the oil industry together.

A global energy redesign was at work where emerging countries would become the major oil consumers and the balance of energy flows would be eastwards.

Al-Sada noted that oil-producing countries would have to adjust and adapt to such change and accordingly invest to capture such a market opportunity in an environmentally sustainable way.



Dr Falah J Alamri, on behalf of Abdul-Kareem Luaibi Bahedh

“Iraq is endowed with huge natural resources, mainly oil and gas, which makes investment an important issue for the economic and social development requirements, on the one hand, and meeting incremental global demand for oil and gas, on the other.”

— Dr Falah J Alamri,
on behalf of Abdul-Kareem Luaibi Bahedh

The Minister reminded delegates that there were also downstream challenges.

“The diversification of feedstocks from heavy oil to light condensates associated with an increasing share of transportation fuels as the final destination of crude oil, lead me to believe that the next wave of innovative investment could take place in the downstream industry,” he concluded.

The next speaker was meant to be **Abdul-Kareem Luaibi Bahedh**, Iraq’s Oil Minister and this year’s OPEC Conference President, but his address was read out on his behalf by Dr Falah J Alamri, Iraq’s OPEC Governor.

He pointed out that investment was essential for the oil and gas industry and embracing future demand.

Thus, it was important to adopt clear policy directives and objectives and proper planning, using accurate, up-to-date data, in order to support future increases in supplies.

“This approach was taken into account when we in Iraq developed and awarded our existing technical service contract to international oil companies (IOCs),” said Alamri.

He stated that to ensure that the world economy benefitted from regular and secure oil supplies, OPEC Member Countries, in particular Iraq as a Founder Member, had been investing billions of dollars to increase crude oil production and spare capacity in the near future.

This, he said, presented a basic challenge for oil companies and producers when it came to investing in future production capacity in an industry that was characterized by high capital investment and long lead times and notwithstanding OPEC’s statutory commitment to oil market stability by supplying petroleum at a reasonable price level.

“Iraq is endowed with huge natural resources, mainly oil and gas, which makes investment an important issue for the economic and social development requirements, on the one hand, and meeting incremental global demand for oil and gas, on the other,” said Alamri.

“It is obvious, logical and right for Iraq to focus on upstream investment with the goal of expanding its production capacity and exports.”

Alamri noted that revenue generation would enhance Iraq’s infrastructure. At the same time, the country would preserve oil and gas resources in the ground for future generations to ensure a sustained economic growth in the present and future.

It was important for Iraq to create a suitable and conducive environment for investment, in order to make the oil and gas industry capable and flexible to market changes in the short and medium terms.

Such investments should be incorporating and based on the adoption of advanced technologies, taking into consideration how advanced technology had drastically

changed the map of finding oil, even in very difficult geographic areas and structures and harsh environments in challenging locations.

Alamri continued that advanced technology had contributed directly to strengthening security of supply worldwide, reducing capital needs and the risk involved in the upstream activities, compared to the situation in the last few decades.

He pointed out that oil and gas formed the backbone of Iraq's economy and trade. The country's oilfields held about 143 billion barrels of proven reserves, which equaled about ten per cent of the world total.

As such, the cluster of super-giant fields in the south of Iraq formed one of the largest oil reserves in the world and accounted for about 75 per cent of the country's proven oil reserves. The remaining 25 per cent were located in northern Iraq, near Kirkuk.

The OPEC Governor said that because of wars, embargos, inadequate investment, mismanagement, and ageing infrastructure, the Iraqi oil sector had deteriorated and could not meet the different energy requirements of the people in a nation that had the third-largest oil reserves in the world.

"The government of Iraq is seriously determined to develop and rehabilitate the petroleum sector, which represents the country's largest economic segment, by cooperating with the international oil majors, as well as with experienced, integrated and capable oil companies to achieve this task," he affirmed.

He disclosed that a comprehensive build-up of the sector was the subject of a master-plan drawn up by the Iraqi Oil Ministry that called for increasing oil production and oil production capacities, doubling refinery capacity, increasing and enhancing export facilities and capacities, as well as having a pipeline storage and distribution infrastructure and network that could accommodate future production targets and domestic energy requirements.

Thus, said Alamri, cooperation with the IOCs was a key factor in the government's policy for the development of Iraq's petroleum sector and securing the financial investment required.

Moreover, in order to build a sustainable self-sufficiency and capacity to handle increasing production volume, Iraq planned to build four new refineries to increase the production of refined products to cover the present and anticipated local consumption.

The downstream investment projects were on the path of implementation and execution as grassroots projects and several expansion schemes for existing refineries.

Alamri informed that another key investment initiative and requirement for the government of Iraq was to utilize the associated natural gas from the southern oil fields that had been flared for decades.

"This will be mainly used for power generation purposes and will result in higher and steady electricity output, increasing the feed for power generation. To implement such a plan needs a massive amount of external funding and technical support."

He said the Iraqi Oil Ministry realized that the only viable path to achieve investment targets within a time-frame that could reasonably support the country's post-war development and recovery process was to tender its producing fields in licensing rounds.

"The initial production figures of the contracts executed so far as a result of Iraq's first two licensing rounds are truly tremendous."

Alamri explained that the oil licensing areas were forecast to produce over 60 billion barrels of oil over the next 20 years.

"It is worth mentioning in this respect that since signing the technical service contracts, there has been an increase in collaboration between the affiliated oil companies of the Oil Ministry of Iraq and the concerned IOCs, whereby many key issues were worked out," he affirmed.

An advisory team was formed to oversee and follow up the IOCs business performance. Joint meetings were being held on a regular basis between the Ministry and representatives of the IOCs operating in Iraq, in order to seriously look into details and issues that might impede or hinder the work in progress of the operators in the licensing areas.

"Since field development also requires many other complementary activities and facilities to accommodate the production increase, Iraq's export capacity was enhanced with its first and second single point mooring (SPM) export terminals, which were put into service in January and April 2012, adding 1.8 million barrels/day of export capacity, together with the expansion of storage capacity to give adequate flexibility in managing the production and export increase."

Alamri pointed out that the joint working plans with



Abdurahman Benyezza

“In Libya, we are looking forward to a modernized oil industry of the highest international standards, an industry built on trust, transparency and mutual partnership.”

— Abdurahman Benyezza

He told participants that production had returned in his country at an unexpected speed, quickly reaching over 90 per cent of the normal domestic output level before the revolution.

This, said the Minister, was despite the damage suffered by production facilities and control rooms, offices and residential camps, as well as a lack of logistical and service company support, a lack of spare parts and financial constraints.

“Production restoration started on September 9 last year, after an almost complete shut down on March 6, when output fell to around 50,000 b/d.”

But by the end of the year, Libya had reached a crude production rate of 1.035 million b/d of crude and two billion standard cubic feet of gas/day — only 115 days after production restoration began. This exceeded all expectations.

The Minister added that three domestic refineries — Al Zawiya, Tobruk and Brega — were all back to full capacity by the first quarter of 2012, while the Ras Lanuf plant was still out of service.

“Allow me here to express my sincere thanks and appreciation to the courageous, willful and dedicated national engineers, operators and all employees in the oil sector, who have achieved these production levels in such a record time, notwithstanding the difficult conditions experienced at all sites,” he declared.

Credit, he continued, was also due to the “brave revolutionaries and Guards of the Oil Facilities Unit, who have provided security to the oil facilities.

“I am proud to be a member of the Libyan oil industry team, and I am honoured to bear the responsibility of this Ministry,” he stated.

Benyezza said that, as for the future, the country envisaged the creation of a distinct ministry with the primary objectives of maintaining and developing the country’s oil

the IOCs had resulted in a seawater supply project to provide water injection for the oil fields.

“These operations present an additional and secondary investment, requiring a considerable amount over and above investment for the oilfield production.

“I believe that the situation of the oil sector in Iraq is improving and at a great pace. The lessons that were acquired from our experience as an open and free economy seeking a successful path to develop its resources for the well-being of the people support the essence of the theme of this Seminar, ‘Fuelling Prosperity, Supporting Stability’,” he concluded.

The success of Libya’s return to oil production, after the country’s internal problems in 2011, was highlighted at the Seminar in an address by **Abdurahman Benyezza**, Libya’s Minister of Oil and Gas, who also said that the international oil industry was used to working in difficult times, such as the economic climate today.

and gas resources and reserves; optimizing exploitation and development with the latest technologies; increasing gas utilization; and developing the refining and petrochemical industries.

“And above all, the overall emphasis will be on the development of our human resources, the health and safety of our personnel and the preservation of the environment,” the Minister affirmed.

“We are now embarking on the implementation of a five-year medium-term plan to increase oil production capacity to over 2m b/d and gas production capacity to around 3.5bn standard cu ft/d.”

This, said Benyezza, would be achieved through upgrading and improving facilities and operational conditions in producing fields; drilling development and infill wells; improving oil field production and injection facilities; expanding power generation capacity and implementing maintenance projects and work-over operations.

“In addition, there will be the development of new projects, which were approved in previous years. In 2011, nothing much was done, but hopefully by the end of 2012, we will launch all the schemes. The estimated budget for these projects is about \$10bn,” commented the Minister.

“We consider ourselves somewhat lucky regarding the facilities. Luckily enough, we have spare facilities to accommodate the increase in production, with some minor work, maintenance and overhaul of the existing facilities,” he explained.

As for the long term, the Minister said Libya planned to increase its reserves and production capacity by firstly embarking on extensive exploration activities.

Libya, he revealed, possessed about 40 per cent, or around 730,000 square kilometres, of open area in which exploration experts believed there was great potential for substantial oil and gas reserves.

“This will definitely require advanced technology and highly skilled human resources. We will also need high capital investments. Current estimates for this are about \$20bn,” he affirmed.

Secondly, said Benyezza, they would evaluate discovered, or undeveloped, fields. The country had some fields discovered, but they had not been developed because some reservoirs had marginal reserves, some fields with large reserve figures required large investments, other fields required advanced technology for development

and there was also the complexity of the reservoir geology to contend with.

Thirdly, the country would evaluate the upside potential of the unexplored areas, where they had existing facilities. This will be done with the acquisition of new seismic data, the review and update of old geological models in the areas and the deepening of existing wells for deep-target exploration.

“And fourthly, extensive studies are being undertaken to identify EOR and IOR projects to be implemented at existing fields, where production has declined for a number of reasons.”

These, said the Minister, included underperforming fields due to the complexity of the reservoir geology; the need to upgrade existing surface and/or subsurface facilities; a lack of advanced technology and targeting nearly depleted fields.

“We foresee that such IOR and EOR projects will contribute to the increase in reserves and the capability to produce to between 7–10bn b of oil. With the use of this modern technology and equipment, the investment is currently estimated to be about \$15bn,” Benyezza disclosed.

Regarding the downstream, he stated that the present refining capacity of Libya’s five refineries with various capacities was 380,000 b/d of crude oil.

In this area, they planned to upgrade the Ras Lanuf, Al-Zawiya and Tobruk refineries and were also studying various options, locations and capacities for new refineries throughout the country.

The objective, said the Minister, was to fulfill local demand by increasing gasoline and diesel production; improving specifications for both these products to international standards; converting heavy fuel oil to lighter products and petrochemicals and using the latest technology.

As for petrochemicals, the country planned to upgrade its ethylene and polyethylene plants at Ras Lanuf; build a new polypropylene plant at Ras Lanuf and upgrade the urea/ammonia and methanol plants at Brega.

In this direction, said the Minister, the objective was to increase production capacities, add new units to existing production lines and, above all, produce more products using the latest technology.

“For the implementation of these long-term projects, we are having a session of lessons learned from the previous agreements, terms and conditions. This will be



Paolo Scaroni

“It is a hard job to predict what the gas market will look like in the next five years.”

— Paolo Scaroni

In the next presentation, **Paolo Scaroni**, Chief Executive Officer of the Italian oil company, Eni, spoke at length about the gas industry and how it would figure strongly in the global energy mix going forward.

He told the Seminar that there were three overriding reasons why gas would be the choice fuel and they were all to do with price.

The first was the future price of gas, the second was the expectation of long term gas prices, a key to many billions of dollars of potential investments, including those that Eni would make in Mozambique, where it had so far discovered around 50 trillion cubic feet of gas resources.

And the third reason was that over the long term, the price of gas would inevitably impact the price of oil as too wide a gap would drive fuel switching.

“But it is a hard job to predict what the gas market will look like in the next five years,” he stated.

“The only thing we can be sure of is that the current situation will not last,” he added, referring to the fact that, today, the exact same molecule of gas changed hands for less than \$3/per million British thermal units in the US, compared with more than \$17/m btu in the Far East.

“And in Europe, we have two reference prices — spot at around \$9/m btu and long-term oil-linked prices which are currently around \$12/m btu. These gas prices also make little sense compared with oil prices,” he explained.

Scaroni said that taking US prices of less than \$3/m btu translated into a price of around \$13/b of oil in terms of energy content.

“This means that an equal economic power gas now in the US trades at less than one-sixth of the price of West Texas Intermediate. My view is that these differences will be partially or wholly evened out in time.

“But the key question is when and at what level? This will depend on a number of different factors, of which

done partially by the internal resources and also opening the doors for the IOCs to participate in implementing the projects.

“In Libya, we are looking forward to a modernized oil industry of the highest international standards, an industry built on trust, transparency and mutual partnership,” Benyezza stressed.

Concerning investment, he said that having a stabilized oil price was important for the development of the economy worldwide.

Libya, he said, relied heavily — some 95 per cent — on oil production and it lacked the technology required.

“At this point in time, I think we have to open the dialogue in providing technology, with a reasonable price, and with efficiency, in order to increase the capacity in providing energy to the world,” he told delegates.

“At the last OPEC Seminar, we were talking about difficult times. At this Seminar, we are talking about difficult times. I think it has always been difficult times, but working together, I think we can overcome the difficulties we are facing,” he concluded.

the first is, of course, demand. And here there are a lot of question marks.”

The Eni executive said that by 2020, “do we think China’s per capita consumption of gas will be 10 or 20 per cent of US consumption? That will make a difference between demand in China growing by 500 billion cu m or 1,000 bn cu m.

“Do we think that the Fukushima disaster has dealt nuclear power a temporary blow, or a permanent one?

“Again, that has a huge repercussion on gas demand forecasts. And will the transport sector continue to use oil, or will gas make big inroads. There are certain incentives to switch fuels.”

Scaroni asked participants to assume for one moment that all the trucks in the US were converted from gasoline to natural gas. “That would save more than \$40bn a year in fuel costs at current price levels in the US and 850bn cu m of gas demand.

“So, to sum up, demand will no doubt grow, but estimates can swing widely, depending on the different assumptions one uses.”

Scaroni maintained that the other key factor in determining future gas prices was how much gas would be available for export in the world in 2020. Here too, there were more questions than answers.

“Will the US start to export gas in significant quantities?” he asked. “I’m not sure. For example, it remains to be seen whether American citizens who accept the discomfort of the shale gas activity for reasons of energy security and independence, will willingly accept it to benefit the Bakken bank accounts of fuel exporters, especially as the likely consequence of US gas exports would be higher domestic prices.”

The Eni head said that another key variable would be unconventional gas outside the US. The potential was certainly significant with estimates of technically recoverable reserves in the region of 400 trillion cu m, or 125 years of world consumption and big deposits in China, Latin America and Africa.

“But here too, between potential and deliverable, there are a lot of ifs and buts, including local laws, attitude and specifically geological traits.”

Last, but not least, said Scaroni, supply growth would depend on the big new upstream developments which would start production over the next decade, not least, Eni’s project in Mozambique.

“We plan to take the final investment decision on this project, authorizing tens of billions of dollars of capex over the next 18 months. But to do so, as you can easily imagine, I will need to go to my board with a power-point presentation which says how much gas am I going to produce from 2018 onwards and what price I expect to get from it.

“So, given everything we have said about supply, demand and local trends, what will I write as the future gas price? The number isn’t yet defined, but it will be based on some assumptions.”

He said that, of these assumptions, firstly, gas would increasingly become the fuel of choice worldwide with significant demand growth in Asia.

Secondly, demand trends would be influenced by prices. That meant that the demand areas where gas was cheaper would grow faster than in areas where it was expensive, as the recent rush of chemical industries moving to the US showed.

And thirdly, gas prices would narrow the gap to oil prices. Scaroni maintained that either gas prices would go up, or oil prices would go down.

“The current differential just does not make economic sense. It is only a matter of time before this discount stimulates gas demand in ways that we could not previously imagine.”

Scaroni continued: “You may wonder, with all these uncertainties, how I am progressing on my board presentation for Mozambique. But on this front I am fortunate. With exploration costs in the region of less than \$2/b, development costs contained by the nature of the field and a prime position to supply growing Asian markets, in almost any scenario, my board will be happy to press ahead with this historic development for Eni,” he concluded.

In the final presentation of the Seminar’s third session, delegates were treated to an overview of Austria’s national oil company, OMV, by its Chief Executive Officer, **Gerhard Roiss**, who pointed out that Vienna, the headquarters of OPEC, was well known for its beautiful wine yards, but not for its oil production.

He also spoke about the relationship between national oil companies (NOCs) and international oil companies (IOCs) and how Austria was setting an



Gerhard Roiss

“We should think about our next generation — how can we provide more jobs for them and what can we do with countries that might have products, social products that one could distribute to other countries.”

— Gerhard Roiss

“So if you ask me how do you feel culturally — we feel like a regional IOC. But in this combination, I would like to share with you one example of what can come out of a fruitful cooperation between two countries, between two companies — Abu Dhabi on the one side and OMV and the Austrian government on the other.”

Roiss said it all started in the petrochemical sector. Seventeen years ago, Abu Dhabi saw that OMV was also in petrochemicals. OMV did not have a strong position, but it had tradition, know-how and technology. But, it did not have the financial power to develop it all.

“If you are number two in Europe going into polypropylene in the late 1950s — Eni had been number one — and polypropylene has been developed as the number one plastic product in the world, the decision was right to go in.”

Roiss said that together with Abu Dhabi the first step was to develop a European position — to develop the firm, Borealis, which had its own technology, and could be developed into a strong European player.

“Being number one, number two or number three — this was the target that we achieved. Taking over some mergers, acquisitions, and establishing consolidation, at the end we developed a European position, to develop technology and be in the premium segment of this commodity sector — polyolefins.”

Roiss said the second step ten to 12 years ago was to grow an Abu Dhabi position in polyolefins, using OMV’s technology, using its knowledge and its people to build up an area where they had sufficient feed, competitive feed.

“And I can tell you now that it took us about 50 years to build up 4m t of production in Europe. But it took us 12 years to build up a similar position in Abu Dhabi. We

example in Europe with regard to its low unemployment figures.

“There has been oil production in my country for more than 60 years, which means recovery rates of about 60 per cent — 60 per cent in oil fields is a slim oil rim, with gas above and water below. But we are not talking about volumes of oil that would place us here on this wall of being an OPEC Member, but we do talk about technology,” he said.

Looking back, Roiss stated that 17 years ago the Austrian government asked the Abu Dhabi government if they would be interested in taking a share in OMV — an NOC getting a share in another NOC.

That was 17 years ago, he said, and if asked to define whether OMV was a NOC or an IOC, one had to be aware that 90 per cent of its upstream production was outside Austria.

have the same quality of products of production here in Europe that we have in Abu Dhabi for the Asian markets. It was driven by people, it was driven by culture,” he affirmed

Roiss pointed out that all the projects, all the investments — many billions of dollars in investments and schemes — were on time and were in the frame of cost.

“The same quality we produce in Europe, we produce in Abu Dhabi. But the competitive position of Borealis and Borouge in Abu Dhabi, put together, are now in the top five globally and in a really strong competitive position.”

Roiss said they had a good feed position in Abu Dhabi. Regarding the size, the four million tons of production in Abu Dhabi were on one site, which offered a different cost position, but for world-scale plants, compared to what they had in Europe, where there were many sites, with different cost positions.

“But again, this is an example of what one can achieve if you have this cooperation between NOCs and IOCs. This is one of the successful products,” Roiss declared.

“When we talk about the driving force behind this cooperation, at the beginning it was to do with production, but now it is more about productivity gains, I would say it’s technology, it’s sharing risk, it’s capital investment, but I think this will not be sufficient for the future.

“Yes, we have close areas because we have unconventional oil and gas, we have reserves in the deep sea, we have areas with new developments, with shale gas, as we have heard, we have areas where exchange of technology and supplying technology is important and will be a driver of cooperation between the NOCs and IOCs.

“But I think we should not forget what we have heard — that innovation is driving the growth of our economy. But if we talk about the growth of our economy, then we



Mohamed Bin Dhaen Al Hamli (l), UAE Minister of Energy, chats with Gerhard Roiss, CEO, OMV.



Seminar participants took full advantage of an Internet Cafe at the Hofburg Palace, sponsored by the Ministry of Oil and Gas, Libya.

need stability. I do not think that we can maintain stability if 50 per cent of our young people have no jobs in many of our countries,” he stated.

Roiss stressed that oil was delivering wealth, but the younger generation would not understand why oil or gas was not delivering jobs for them.

“And they think, we as an oil industry have to concentrate much more on where we are active. But what does that mean for our next generation in terms of producing jobs?” he asked.

The OMV head said one of the questions was “are there some ideas, some solutions that we have in some European countries that you would not find somewhere else?”

He stated: “Yes, there are — just compare some figures. If you take Austria, if you look at Germany — what is the unemployment rate for young people? Not 20 per cent, not 50 per cent, it is between four and eight per cent.

“There will be no unemployed young lady or man in Austria below the age of 21, not getting a guaranteed job. That is from the system, not the government,” he stated.

“For instance, we have the apprenticeship system, occasional training. We have a system to help the young people get a job. We bring them closer to their job over time, we have the knowledge, we have the software.

“And that is what I would like to focus on here — think about the next generation, and not only in terms of oil, unconventional oil and gas.

“We should think about our next generation — how can we provide more jobs for them and what can we do with countries that might have products, social products that one could distribute to other countries.

“This is what I would like to pay attention to. Innovation is creating productivity, innovation is creating growth, but I think all of this needs social welfare,” he concluded. ❖

Session Four

Technology, Environment and Policies

Themes

- Importance of multilateralism in addressing climate change
- Environmentally friendly technologies: solutions and challenges for the oil sector
- New technologies in supporting the oil industry
- Technological developments and their potential impacts on oil demand
- Policies affecting the energy scene



L-r:

Urban Rusnák, Secretary General, Energy Charter Secretariat

Peter Voser, CEO, Royal Dutch Shell plc

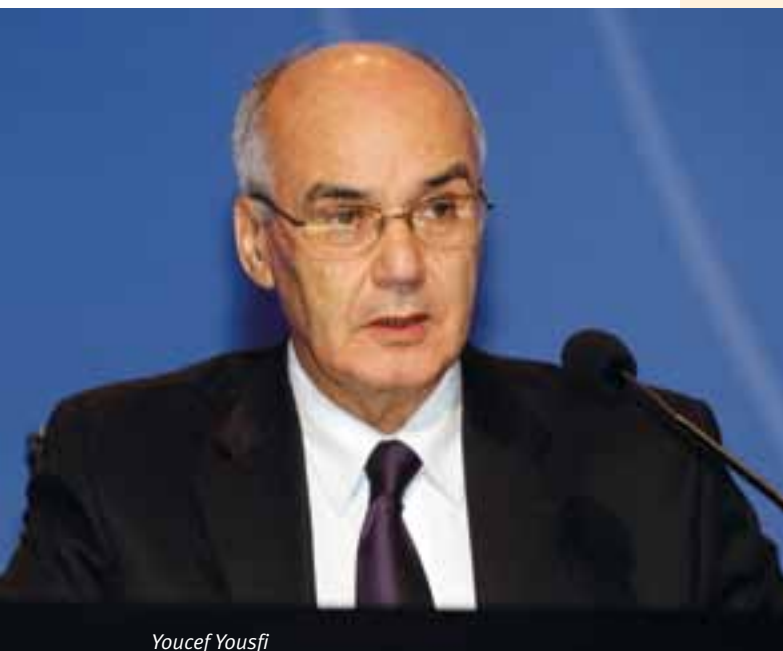
Hani Abdulaziz Hussain, Alternate President of the OPEC Conference, Minister of Oil, Kuwait

Youcef Yousfi, Minister of Energy & Mines, Algeria

Christiana Figueres, Executive Secretary, UNFCCC

Brad Page, CEO, Global Carbon Capture & Storage Institute (at the lectern)

Alan Crain, Senior Vice President, Baker Hughes



Youcef Yousfi

Chairperson:

Youcef Yousfi

Minister of Energy & Mines, Algeria

Keynote speaker

Hani Abdulaziz Hussain

Alternate President of the OPEC Conference, Minister of Oil, Kuwait

Speakers

Christiana Figueres,

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Peter Voser

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“I believe that the oil and gas industry will be able to meet growing demand, while minimizing the environmental footprint through processes and products that will preserve the environment.”

— Youcef Yousfi

Before introducing the guest speakers in the fourth session, **Dr Youcef Yousfi**, Algeria’s Minister of Energy and Mines, the session Chairman, commented on the importance of the application of new technologies and how he believed that the petroleum sector would rise to meet the growing environmental challenges.

He told delegates that climate change had become a major subject of politics, given the global challenges.

However, he maintained that issues related to climate change could not be resolved without having a multilateral framework.

“It is clear that each actor has a major role to play and must bring its full contribution. The petroleum industry has, of course, to actively participate in reducing greenhouse gas emissions, mainly through reducing and hopefully stopping gas flaring, studying and

possibly generalizing carbon capture and storage (CCS) technology, promoting energy efficiency, bringing to the market cleaner fuels and investing in renewable developments.”

Yousfi pointed out that it was known that technological innovation in all segments of the oil chain had allowed exploration and development of new reserves in frontier areas.

“Beyond that, it seems to me that scientific and technological progress in the broadest sense must be shared and made available to millions of human beings who do not yet have access to modern forms of energy,” he affirmed.

The Minister maintained that the successful application of new technologies had opened up new prospects for the oil and gas industry, including deep-water exploration, new resource discoveries, conventional resource production at economic cost, deep water pipeline laying and technology etc.

“However, new technology still poses challenges in terms of, for example, water resource management and environmental protection.

“Obviously, regulation is necessary for the further protection of the environment and the health of the population. But I am confident that the hydrocarbons industry, which has taken up more than just one challenge in the past, will be able to meet the current and future challenges,” he affirmed.

“I believe that the oil and gas industry will be able to meet growing demand, while minimizing the environmental footprint through processes and products that will preserve the environment,” he concluded.

The keynote address to the fourth session was delivered by **Hani Abdulaziz Hussain**, Kuwait’s Oil Minister and Alternate President of the OPEC Conference, who alluded to the fact that innovation and technology would be “critical drivers” for renewable sources of energy going forward.

He told participants that in considering the future of the energy markets the important subjects of oil, capacity expansion and the global economy could not be looked at in isolation.

“We also need to consider the critical role that will be played by technology, the need to protect the environment and the possible impact of policies,” he stated.



Hani Abdulaziz Hussain

In reality, said the Minister, to meet the world’s incremental energy demand, all energy sources were needed.

As there were uncertainties about future energy supply and demand, then energy would require a portfolio of balanced solutions to satisfy growing demand for energy, he maintained.

“These solutions will include expanding energy efficiency, developing all economic energy sources, including conventional oil, gas and unconventional resources, progressing all forms of renewable energy and biofuels and the use of technologies to find and produce cleaner and safer fuels.”

Hussain said that for conventional resources, new production technologies had been instrumental in extracting more oil from existing fields and increasing recovery rates.

As an example, additions to global proven energy reserves had increased substantially from one trillion barrels of oil in 1990 to 1.4tr b in 2010.

Much attention was paid to new discoveries in new regions, but, said the Minister, it was important to know that most of today’s liquid fuels came from fields that had been producing for decades.

“More than 95 per cent of crude oil produced today was discovered before the year 2000. Many large fields can hold decades of supply,” he explained.

“Future policies need to ensure that all sources of energy, including oil and gas, are part of a balanced future energy portfolio.”

— Hani Abdulaziz Hussain

The Minister said that, for instance, the Burgen field in Kuwait was discovered in February 1938. It began production in 1946 and was still producing nearly 1.7 million barrels/day.

“So, new technologies can also help revive ageing fields. With easy-to-access oil no longer able to keep up with demand, resources once considered too costly or difficult to extract are being developed. Technology makes this possible.”

Hussain pointed out that new production from new deep offshore oil discoveries in Brazil, the Gulf of Mexico and West Africa were only made possible because of the advances in production technologies.

Concerning the environment, he said today producers and consumers had acknowledged and accepted that all parties needed to work together to mitigate the effects that the energy industry had on the environment.

“Over the next 30 years, advances in technology will continue to remake the world’s energy landscape. Fossil fuels will remain dominant and play a key role in ensuring both a sustainable economic growth and a smooth transition towards a lower carbon world.

“If we are going to meet the environmental challenges, our decision on energy choices must also include investing heavily in producing cleaner fuels and in technologies that reduce carbon emissions, such as carbon capture and sequestration.”

At the same time, said the Minister, innovation and technology would be critical drivers, if biofuels, biomass, wind power, geothermal and solar were to achieve a meaningful share in the future energy mix.

And in considering the future sources of energy, “we must not ignore the impact of efficiency. Energy efficiency is largely recognized as the most cost-effective active supply source to meet the growing energy demand, while contributing to climate change mitigation and economic growth.”

Hussain noted that over the period 1980–2000, world energy efficiency improved by 1.2 per cent annually, which was impressive. Energy efficiency would continue to improve globally at an accelerating rate of two per cent per annum.

As for the policy debate, he said government policies would play a key role in meeting energy demand, as well as limiting greenhouse gas emissions.

“We need to evaluate the implications of possible more aggressive policies to address climate change. While we can assume that a range of policy tools will be deployed, and while we know that such CO₂ policies will have a critical impact on the economics of energy consumption and the future fuel mix, unfortunately, in many countries, there is no clarity of what these policies will be,” he said.

The Minister said that considering that 100 years ago most of the world’s energy came from wood and coal, “we know that energy supplies have changed dramatically over time, driven by policy and technology changes.”

However, for oil producers, policies which had an impact on energy demand security were a major concern.

“Future policies need to ensure that all sources of energy, including oil and gas, are part of a balanced future energy portfolio.”

Considering Kuwait, he said the country was committed to fulfilling its role in the international oil market as a reliable producer.

Hussain said that as oil would continue to play an important role in a balanced future energy mix, Kuwait planned to spend some \$170 billion over the next ten years to develop the country’s resources.

“But we are also targeting the application of technology solutions. One example is heavy oil development, which is considered one of the main objectives in the upstream to achieve our long term 2030 strategy.

“Parallel to this, Kuwait plans to build a state-of-the-art research and development centre. This will be an independent research and development organization network, co-owned by national and international partners, including oil companies and oil service providers,” he revealed.

On the renewables front, said the Minister, the Kuwait Petroleum Corporation (KPC) had taken a strategic decision to conserve Kuwait’s hydrocarbons resource base, by introducing solar energy technology to replace part of the use of hydrocarbon fuels in its operating companies.

“In order to consider potential development in the areas of technology, the environment and policy, we have to recognize the large range of uncertainty that comes with any long-term forecast,” he told the Seminar.

The future, he continued, was not predetermined and it was important to recognize that investment decisions made decades ago were critical to meeting today's energy demand.

"Decisions made today will help meet the demand for generations to come. The evaluation of future options must consider factors that influence energy supply and demand on global, regional and national levels," he asserted.

This included expanding prosperity across a growing world population, the cost and likely availability of various forms of energy, the development and deployment of new technologies and government policies and public preferences.

"Kuwait will definitely continue to play a role in meeting the future energy needs and has already committed to a long-term strategy to expand crude oil capacity, as well as produce environmentally friendly refined products," stated Hussain.

"Kuwait is committed to delivering excellence in all aspects of our business today, tomorrow and in the far future," he concluded.

The transition to a low-emission global economy has begun. That was one of the views put forward by **Christiana Figueres**, Executive Secretary of the United Nations Framework Convention on Climate Change (UNFCCC). She also said in her address to the Seminar that there were many "win-win" solutions for both climate change and OPEC, which put the Organization's Member Countries at the cutting edge of the energy future.

She pointed out to participants that there was little doubt oil, together with other fossil fuels and deforestation, had been a major contributor to the climate crisis that the world collectively faced.

"That being said, there is utterly no doubt that the global society we have today has been built on the back of oil. Oil is almost a miraculous product — energy dense, stable, transportable and flexible across an enormous number of applications," she said.

Without oil, said Ms Figueres, the incredible trajectories of personal mobility, global commerce, cultural exchange and scientific advance that had "characterized our species over the past 150 years, would simply not have occurred."



Christiana Figueres

She continued: "Simply put, oil deserves the recognition for its critical role in bringing humanity from the past age to the one in which we live now."

But the UNFCCC head maintained that the question they all confronted today was: "how do we go from where we are to the next stage of our development."

She stated: "I believe that it is inevitable that we move towards a low-emissions society. I further believe that this movement has started, in large part, due to the progress of international climate change policy."

Ms Figueres asserted that it had become increasingly clear that the advance of the international climate change negotiations was not as some would have it — a threat to the economic future of OPEC — but rather an opportunity for OPEC Member States.

And there were three main reasons for that. Firstly, she said, as greenhouse gas emissions continued to rise, vulnerabilities and climate change impacts were increasing, not only in frequency, but also in severity.

"Impacts will spare no country and no economic sector. Clearly, climate change impacts differ among the very diverse OPEC Member States."

She explained that those with an active agricultural sector were vulnerable to changing precipitation patterns and some exacerbated risks of infectious diseases, while

“Fighting climate change does not mean fighting oil and gas. Fighting climate change means fighting unnecessary greenhouse gas emissions and you can help us do that.”

— Christiana Figueres

those with low lying coastal areas would be affected by sea level rise.

“Some are already suffering from increasingly severe heatwaves and salt water intrusion into fresh aquifers, forcing mega investments into cutting-edge desalination technologies, which are themselves energy intensive.

“Hence, I would argue that it is in the long-term self-interest of all oil and gas-producing nations to contribute to solving climate change, in order to avert the worst impact of climate change on their own economies and societies,” she affirmed.

Secondly, continued Ms Figueres, even with successful climate change mitigation policies in place, oil would undoubtedly remain a predominant fuel in the world’s primary energy mix.

Quoting figures from the International Energy Agency (IEA), she said the full implementation of all existing emission reduction pledges and climate change policies would not lead to a decline in OPEC’s oil market share, production, or revenues.

“In fact, it is quite the contrary. Under a scenario of full implementation of current climate protection policies around the world, oil demand would reach 99 million barrels/day by 2035, a 15 per cent increase over 2010 levels.

“There would also be a quadrupling of revenue, compared with the period 1984 to 2009.”

The UNFCCC head said that even under the IEA’s more ambitious green growth ‘450 Scenario’, based on more stringent policies needed to make it possible to limit average global warming to less than 2°C, oil revenues to 2035 would still be three times higher than those over the last 25 years.

“I conclude from this that the advance of the climate

change convention will co-exist with increased demand for oil delivered by OPEC nations.”

Ms Figueres said that, thirdly, the cost of oil extraction and production was rising.

“Oil is ultimately a finite resource with declining production at many fields and easy, cheap oil is becoming a thing of the past, even in many OPEC Countries,” she contended.

She said that while she could not speak with any authority about the peak oil hypothesis, it was fairly apparent that “we are pushing boundaries in geography, geology, engineering and even human capability to access finds to replace depleting fields.”

Ms Figueres said that leaving aside the potential environmental consequences of deep-water Horizon-type accidents, drilling the deep offshore formations of Brazil, or the ice-bound equivalents of the Arctic, undoubtedly involved costs and risks that were difficult to justify.

“Taken together, it seems apparent that oil’s price and demand should remain strong. It is up to all of us to try and make sure that oil’s unique characteristics flow to the highest value applications possible.

“Our aim should be an economic system that strategically directs oil towards the highest margin specialty markets, generating the most amount of economic benefit for each barrel of oil’s emissions,” she stated.

How countries captured the portions of that value was, of course, a matter of national circumstance, she added.

“But it does seem to be beneficial for all exporters to reinvest their positive cash flows into the lower-emission energy sources, where demand will grow in the near future,” she affirmed.

“In that light, I am encouraged by recent efforts of OPEC Member Countries to take leadership in these regards.”

The UNFCCC head stated that the first most evident step was to invest in energy efficiency. This made compelling sense as it allowed a country to continue its economic growth by optimizing oil and gas production for export, away from internal inefficient consumption.

For example, she continued, in the United Arab Emirates (UAE), the Middle East’s biggest energy consumer, energy efficiency was set to become a new focus for the oil and gas industry.

Introducing and implementing energy efficiency technologies would potentially save up to \$3 billion in energy costs.

Ms Figueres said that a second impressive step that she had observed was the recent aggressive investment in solar energy from some OPEC nations.

“Just a few weeks ago, Saudi Arabia announced that it will invest more than \$100bn to develop 41,000 megawatts of solar over the next 20 years. The government aims to create up to 15,000 jobs

in the next decade by nurturing a solar industry — from solar farms to assembly plants, to factories that make row materials,” she observed.

In Qatar, she said, the country’s solar technology sector recently invested more than \$1bn in a world-class poly-silicon facility that aimed to produce 1,800 MW of solar power by 2024.

“Most, if not all, of this energy will be used for energy-intensive desalination, putting vital access to water on a more sustainable path.”

Ms Figueres pointed out that the Gulf OPEC nations had one of the highest solar potentials in the world.

“If this potential is harvested, it is no exaggeration to say that some OPEC nations, in addition to being prominent oil and gas exporters, have the opportunity to become dominant exporters of future energy forms as well.”

The UNFCCC head said that a third measure which was beginning to take hold was the use of sequestration technologies, including enhanced oil technologies and carbon capture and storage (CCS).

CCS had finally been recognized as eligible for funding under the international market-based instrument of the climate change convention.

She said that the Abu Dhabi National Oil Company (ADNOC) may start injecting carbon dioxide instead of natural gas into its offshore fields to enhance oil recovery and was currently working to capture carbon, including from the steel industry.

“These pioneering investments are encouraging and could be followed by other major investments in other countries into CCS to make the technology more marketable.”

Ms Figueres said that market forces would continue to uncover energy alternatives that were less emission-intensive.

“But that does not mean that the value of oil will necessarily diminish, nor does it mean that your income will diminish from its export,” she maintained.

“Alternative energy sources can and will displace oil in lower-value applications, but this is not a new phenomenon.”

She explained that the percentage of electricity generated from oil had declined consistently since the 1990s and yet demand for oil ran today higher than ever, mostly due to the demands of the developing nations that were poised for exponential growth.

“Over time, oil’s migration to the higher ends of the energy and petrochemical markets, where its unique properties cannot be matched economically, will not only continue, but will increase,” she professed.

Ms Figueres maintained that there were many ‘win-win’ solutions for both climate change and for OPEC, which put OPEC nations at the cutting edge of the energy future.

“This is critically important because the transition to a low-emission economy has begun. With the outcomes of the UN climate change conference held in South Africa last year, this transition has started and it will not retract.”

The UNFCCC head stated that the message from Durban to the world was loud and clear — the future was low-emission, high resilience.

This, she said, was exemplified by three of the many key outcomes that were achieved. First, the Durban Conference had secured the continuation of the Kyoto Protocol for a second commitment period, starting January 1, 2013.

Second, it had cemented the mitigation plans of all industrialized nations, plus 49 developing countries, accounting for 80 per cent of all global emissions, all be it on a voluntary basis.

“And yet governments know there must be more certainty than that which is offered by voluntary action. So in Durban it was also decided to embark on a future legal framework that would cover all nations of the world, to be negotiated by 2015 and to go into effect by 2020.

“Many of these issues will be taken forward at the 2012 UN climate change conference to be held for the first time ever in the Gulf region — in Doha, Qatar at the end of this year.

“I have been working closely with the far-sighted government of Qatar in preparation for this important meeting. I am certain that Qatar can count on all of you to contribute to a successful world event.”

Ms Figueres maintained that, on this historical occasion in Qatar, OPEC Member Countries had two opportunities.

“First, you have an unequalled world stage to showcase the contributions you are already making and planning to make to address climate change, to reduce your own vulnerabilities and to build a better, stronger and more resilient energy future for all.

“Second, you can join other developing nations in assuming an international political leadership role by



Peter Voser

“The long-term outlook for oil remains strong, even with the anticipated very strong growth in natural gas resources and renewables.”

— Peter Voser

capturing those efforts in the form of international voluntary pledges in the context of climate change negotiations.”

The UNFCCC head stressed that climate change impacts were a massive threat to human economic development in every region and it went without saying that a political and technological solution to climate change could not threaten the economic development of any region, or any developing country.

“Fighting climate change does not mean fighting oil and gas. Fighting climate change means fighting unnecessary greenhouse gas emissions and you can help us do that.

“The world looks forward to being hosted by one of your key Member Countries and I look forward to seeing you in Doha,” she concluded.

Putting the case for carbon capture and storage (CCS), **Peter Voser**, Chief Executive Officer of Royal Dutch Shell, said in his presentation that the initiative offered a solution for mitigating the growth of global carbon dioxide (CO₂) emissions from energy production. He also described how his company was facing up to the technological challenges the industry was facing.

Voser told the Seminar that two of the biggest challenges facing the world today were producing enough energy to continue social and economic development and addressing the planetary stresses caused by a growing global population.

“Multilateralism is critically important in addressing complex global issues, but we need to approach multilateralism not only in terms of national governments. We also need to think of it in terms of collaboration between companies, universities, scientific institutes, academics and cultures, as well,” he maintained.

“That is because, how we deal with the world’s growing population, with rising living standards, increased urbanization and the resulting increase in energy demand, will affect not only climate change, it will also affect how we manage our energy, our water and our food systems, which are tightly interconnected,” he affirmed.

Voser pointed out that these issues were difficult in part because they crossed many borders — national borders, industrial borders and cultural borders.

“While some of these solutions may arise from local, regional and national efforts, these are challenges we must ultimately address on a global level,” he professed.

“The big question for us in this room is, how do we begin to mitigate these increasing stresses on our resources, while still providing affordable energy to grow the global economy?”

Asking what their role as energy producers was in all that, Voser maintained that while these issues required a broad comprehensive approach, “we know that delivering concrete proposals for challenges of this scale is notoriously difficult.”

The reason for that, he continued, was that corporate and political institutions tended to consider issues in isolation.

“This is beginning to change, as we have seen with the growing understanding and discussion of the inter-related stresses on energy and water systems.

“This is something we at Shell have invested considerable time to understand better. It is a significant issue for our industry, because how we manage or mitigate the stresses on water systems will influence our decisions on the energy system and vice versa,” he explained.

Voser noted that when Shell started to look into this subject, it discovered that there was no standard method of actually accounting for industrial water use. As a result, there was no way to document where the energy system was straining water resources.

“So, we worked with the World Business Council for Sustainable Development and the University of Utrecht in the Netherlands to develop such a methodology of measuring industrial water use and we have applied it to the energy industry,” he revealed.

“We can now estimate with greater accuracy the amount of water needed to generate energy from different sources.”

Voser said that Shell had published all its findings and shared its data with the wider business community and with the International Energy Agency (IEA).

“We expect it will give policymakers a clearer sense of how different energy choices might affect water resources and I think it will help companies make smarter energy decisions in a world of growing water scarcity,” he affirmed.

“At Shell, we are now factoring our data on water use into our scenario models up to 2050. This, in turn, will give us a better understanding of the demands the energy system will place on global water resources in the years ahead.

“This is a good example of collaboration at work. It is one small step towards a more integrated approach to energy and environmental policymaking,” he contended.

Voser said that in looking at these issues, business had the opportunity to apply new technologies, and an innovative approach at a local level before there was any national or global construct in place.

“In fact, this bottom-up approach may be more viable and gain more momentum in the long run, given the obvious failure of ambitious top-down approaches of recent years,” he maintained.

For example, he said, at Shell’s new Pearl gas-to-liquids plant in Qatar, where water was obviously in short supply, the company designed the plant to run without drawing water from Qatar’s scarce fresh water resources.

“Its water-processing facility recovers and treats industrial water and reuses it. It is the largest of its kind in the world,” he observed.

Voser said that global businesses like Shell’s also had a major role to play, because of their extensive value chains and the depth of talent their employees could bring to expand the understanding of the issues at hand.

“This gives us the opportunity to show governments

and policymakers what we can offer. And it reinforces the need to look beyond immediate borders,” he said.

The Shell executive also said that as global businesses, “we also must be clear about what we expect from governments. They can drive innovation and investment, for example, by providing practical incentives to support the development of promising new technology and by making education a priority.”

CCS technology, he said, was a good example. Given that most of the energy demand in the next few decades would be met by oil and natural gas, CCS held a promise to mitigate the growth of global CO₂ emissions from energy production.

“The IEA says if CCS can be implemented rapidly, it could account for 19 per cent of the CO₂ reduction, if that is needed later in the century. Without CCS the cost of tackling climate change could run 70 per cent higher.”

Voser stressed that Shell was committed to investing in this technology through several projects — from the demonstration phase to industrial scale roll-out.

“Here again government support is absolutely vital during the demonstration phase. The technology is costly and without the price of carbon, no system exists for CCS to produce revenues,” he said.

“Thanks to the support of the government of Canada, we expect to make a major investment decision soon with the development of the first certified carbon capture reservoir at our Alabaska oil sands project.”

Voser said many aspects of CCS, such as injecting CO₂ for enhanced oil recovery, had been used safely for many years. But the technology needed to be developed further and pushed through its demonstration phase before it could be rolled out on an industrial scale.

“We also expect to see continued innovation in advanced enhanced oil recovery technologies.”

He stated that with worldwide energy demand expected to double in the first half of the century, with oil and gas accounting for up to two-thirds of that demand, producers would have strong incentives to bring more barrels to the surface.

And as new reserves became more difficult and costly to find, increasing recovery from existing reservoirs would be more important than ever, claimed the Shell head.

“That is why continued improvements in this technol-



Brad Page

“If we are to substantially reduce emissions from burning fossil fuels, then CCS is not an option — it is mandatory.”

— Brad Page

ogy are an important part of Shell’s research and development efforts.”

He continued that the IEA had estimated that the application of improved oil recovery techniques would potentially yield an additional 300 billion barrels globally.

“To put this in perspective, this is about 15 times the known oil reserves of the United States. The expected rise in oil prices and the decline of mature fields over the next few decades will surely lead to continued strong research in this technology,” he forecast.

Voser pointed out that the long-term outlook for oil remained strong, even with the anticipated very strong growth in natural gas resources and renewables.

“It is true that oil demand will likely moderate or lessen over time in countries like the US, Japan and Europe, due

to greater efficiency in the transportation and other sectors, but that will be more than offset with the strong rise in demand in Asia and the developing countries,” he observed.

“Ultimately, through technology, we seek to bring down the cost for seismic and achieve significantly higher accuracy levels of what we can get out of the ground,” he concluded.

Continuing the case for carbon capture and storage was **Brad Page**, Chief Executive Officer of the Global Carbon Capture and Storage Institute (GCCSI), who maintained in his address that the innovative technology held the key to achieving the two objectives listed by the Seminar — fuelling prosperity and supporting sustainability.

He told delegates that prosperity depended on many things, but accessible, affordable and reliable energy was one of the critical factors.

“Prosperity is also a prerequisite if we are going to advance the standard of living of all of our seven billion citizens globally in a sustainable manner,” he affirmed.

Page conceded that the casual observer was likely to contend that the petroleum industry could not achieve both prosperity and sustainability.

They were mistaken, he said. However, the complete achievement of these twin objectives was somewhat dependent on deploying new technologies, which would inevitably be dependent on efficient, reliable government policy settings being in place.

“The world needs energy and is going to need a lot more of it in the decades ahead,” he professed.

“Our world is changing. Fast developing nations, like China and India, are industrializing and through this raising their populations’ standard of living. They are consuming energy at increasing rates.”

Page said that close behind them was a raft of emerging economies, which were also increasing their energy use.

Unsurprisingly, he stated, all these economies were accessing the lowest cost energy resource — petroleum and fossil fuels generally.

Developed nations were also large energy consumers. Page said that while energy intensity had been improving for many decades now, and most developed countries had actively encouraged renewable energy sources, fossil fuels continued to occupy a large and critical role in modern economies.

This was unlikely to change for many decades. Indeed, he observed, the International Energy Agency (IEA) in its 2011 World Energy Outlook forecast under its reference scenario that global primary energy consumption would increase by 40 per cent between 2009 and 2035.

Developing countries accounted for 91 per cent of this demand growth, while close to 55 per cent of the growth was met from fossil fuels, dominated by natural gas.

“But this growth in fossil fuels use comes with potentially large increases in greenhouse gas (GHG) emissions. GHG emissions must be dealt with,” he pointed out.

Page continued that the IEA, in its reference scenario results, which included all the commitments countries had made to arrest emissions growth, pointed to an increase in total energy related emissions of 26 per cent by 2035.

“This puts us on course for a 3.5°C temperature increase in the longer term and significantly exceeds the 2.5°C target that itself only provides a 50–50 chance of avoiding dangerous climate change.

“Indeed, today it is quite likely that we are very near to 400 parts per million of CO₂ equivalent, against a target for a 2°C outcome of 450 ppm.”

Page said that clearly there were no single solutions available in climate change.

“We will need almost all currently available and nascent low and zero emission technologies to achieve both objectives, along with energy efficiency.”

But he said the good news was that this was achievable and fossil fuels remained a key plank in the global energy future and for a long time to come.

Two things were needed to realize this, asserted Page — technology, firstly, and rational supportive government policy.

“When it comes to dealing with emissions from fossil fuels, CCS is the vital technology. With few exceptions, it is the only solution for reducing emissions from the combustion of oil, products, gas and coal. There really are no other options.

“If we are to substantially reduce emissions from burning fossil fuels, then CCS is not optional — it is mandatory,” he stressed.

Page informed participants that the GCCSI catalogued each year all of the large-scale integrated CCS projects in the world. Today, there were eight industrial scale projects in operation.

Natural gas processing dominated the plants currently in operation, although there were also examples of fertilizer manufacture and synfuel production.

Page noted that, often, the captured CO₂ was used for enhanced oil recovery, providing a valuable revenue

stream, which, in the absence of a strong carbon price, was necessary to make a positive business case for CCS.

“We have also identified another seven very large projects that are under construction. And a further 12 are approaching final investment decision.”

Page said that, on this basis, by 2015, there would be 15 large-scale integrated CCS projects in operation across the world. The schemes would be capturing and storing 35 million tons of CO₂ every year.

“The G8 target of 20 large-scale CCS projects by 2020 is starting to look achievable. But undoubtedly some challenges remain,” he said.

Importantly, continued Page, of the seven projects now under construction, two were in the power generation sector and both in North America.

“These will be the first power plants at large scale to have integrated CCS equipment. And in both cases, a positive business case has had as a key feature, the sale of the CO₂ for enhanced oil recovery (EOR),” he revealed.

Page said that, in the power sector, CCS remained at a comparative cost disadvantage to mature, but other emissive technologies for power generation.

However, cost studies undertaken by credible independent institutions had revealed that CCS was, in fact, today a cost-competitive technology with a range of other low and zero emission power generation technologies that had yet to achieve fully commercialized status, as well as some low-emission technologies that were commercially available.

But Page pointed out that this was not the full extent of CCS activity globally. The institute’s survey had recorded that, in total, there were 73 large-scale integrated CCS projects around the world. These were at various stages of progress.

“Our survey also reveals that North America is the action centre. Europe continues to have a significant number of projects in train, but has slowed in the past 18 months also. China, which is coming off a low base, is accelerating very quickly with many new large-scale CCS projects being proposed.”

Page said that with global climate policy seemingly in the slow lane, compared to three years ago, the driving force behind many CCS projects and especially in North America was EOR.

“This is a good news story for industry and the environment. It gives CO₂ a real commercial value, where

it is treated as a commodity, rather than as a waste strain.

“And it has the potential to improve the energy security position of individual nations, as well as improve the business prospects for upstream oil and gas producers, especially where naturally occurring CO₂ sources are unavailable, or are too expensive.”

For CCS technology developers, contended Page, the EOR application was especially valuable. In the absence of adequate carbon prices, it provided the real life deployment experiences through which the cost of the technology could be reduced.

“However, we know that the storage opportunity afforded by EOR, while very substantial, is inadequate if CCS is to meet the 19–20 per cent share of emission reductions that the IEA models as being necessary for a least-cost outcome.”

Page pointed out that storage in deep saline aquifers was also necessary. Supportive government policies were required to ensure that CCS was developed and deployed in a timely manner.

“Data and forecasts show that climate change objectives cannot be achieved without CCS. Renewable sources of energy are important for our energy and climate future, but alone they cannot solve the twin challenges of energy availability for all and containing global temperature increases to no more than 2°C,” he stressed.

Page stated that fossil fuels would continue to be used for many decades to come and in increasing amounts. But without abatement of the resulting emissions, this reality was at odds with a need to constrain global temperature increase.

“Our annual survey has shown that worldwide there is over \$21 billion of government support being made available for CCS projects. About 40 per cent of this is yet to be allocated.”

Page said that almost universally this support was in the nature of capital expenditure assistance.

“It seeks to recognize that a first of a kind facility has higher capital costs than mature technologies and seeks to bridge some of the gap. This is a valuable contribution.

“However, limiting assistance to only capital support tends to overlook that in the absence of strong carbon pricing, these new low-emission facilities usually compete with emissive and very low-cost existing plants.

“The operating cost disadvantage is often so large that the business case cannot be made for the CCS facility, despite the generous capital support from the government,” he explained.

Page stressed that this contrasted with the treatment “we observe that governments provide for renewable energy sources.”

Globally, he stated, there was a strong and widespread mix of both capital and operating cost support measures for renewables.

“However, when viewed through the prism of achieving energy security and emission reduction at least cost, the case for renewables is not so convincing.”

Often, maintained Page, the real cost of avoided emissions from these programmes was in excess of \$100 per ton of CO₂, a level well above any carbon pricing scheme in place or under contemplation.

“The effect of this is that government action to encourage renewables is distorting the operation of otherwise efficient energy markets. It also distorts the development of new and emerging technologies, often favouring ultimately more expensive alternatives. Increasingly, this appears to be the case for CCS.

“In our view, government policy to support the development and deployment of low and zero-emission technologies generally, in the absence of strong carbon pricing policies, should move back from favouring particular technologies to more neutral settings, where the greatest potential for the abatement of GHG emissions at the least cost is the central test for support and assistance.”

Page stressed that ‘*Fuelling Prosperity, Supporting Sustainability*’ was an accurate and appropriate theme for the OPEC Seminar.

“Achieving both prosperity and sustainability requires a deep appreciation and acceptance of the significant ongoing role that petroleum and other fossil fuels will and must play over the coming decades,” he said.

“It also requires a commitment to efficiently addressing GHG emissions that are leading to unacceptable climate change. CCS is the technology that holds the key to achieving these objectives. It is not an optional technology, but one that exists today and can be widely deployed with the right settings,” he concluded.

Giving his view on the world energy scene and the policies affecting its direction, **Urban Rusnák**, Secretary General of the Energy Charter Secretariat, spoke in his address about the potential contribution and significance of the European Energy Charter, especially in the light of the changes taking place on the global energy landscape.

He told participants that the Energy Charter Treaty was developed on the basis of the 1991 Energy Charter Declaration.

Rusnák explained that whereas the later document was drawn up as a declaration of the political intent to promote energy coop-



Urban Rusnák

“Experience shows that dialogue around the critical energy issues can do much to promote a better understanding, transparency and exchange of information and, in these ways, contribute towards building confidence among the players in energy cooperation globally.”

— Urban Rusnák

eration, the Energy Charter Treaty was a legally binding multilateral instrument and part of international law.

The fundamental aim of the Treaty was to strengthen the rule of law on energy issues, by creating rules for a level playing field to be observed by all participating governments.

In doing so, he said, the provision of the Treaty reduced the risk associated with energy-related investment and trade.

Rusnák informed participants that the organization governing the decision-making body — the Energy Charter Conference — brought the diverse states of the Energy

Charter constituency together to discuss energy issues at its meetings, or through its subsidiary bodies.

In addition, the Charter promoted energy efficiency policies consistent with sustainable development on the legal basis of the protocol on energy efficiency and related environmental aspects of the Energy Charter.

“The Charter Treaty is built on the principle of inclusiveness. It establishes a legal framework for long-term energy cooperation. Such cooperation brings benefits for energy-producing, energy-consuming and transit countries as well,” stated Rusnák.

He pointed out that the Treaty was, in fact, the only example of a comprehensive energy treaty with such a broad membership.

Rusnák said that it was very apparent that the world of energy was changing. The era of cheap oil was over and the new emerging economies were accounting for a significant increase in world demand.

Prices had become extremely volatile, posing major risks to much-needed investments.

“Today, energy security is part of a triangle of shared policy objectives, the other two being the environment and sustainability.”

Rusnák maintained that in addition to policies related to economic development and policies aiming to ensure security of supply of oil and gas and demand, governments were eager to decrease CO₂ emissions.

“The means to achieving this includes increasing energy efficiency and developing low-carbon energy sources,” he affirmed.

Rusnák revealed that an Energy Charter modernization process had been launched by the Energy Charter Conference to ensure that the potential of the Treaty’s legal framework for long-term cooperation in the energy field was fully utilized.

“The modernization is intended to strengthen the Energy Charter authority. The modernization is also aimed at making the Treaty more attractive for those major actors in the global energy market who have not become members.”

Those countries, he said, included major consuming countries, as well as major producing states. Seven out of the 12 OPEC Member Countries were currently observers to the Energy Charter.

“There is no doubt that the Energy Charter constituency would welcome closer cooperation with OPEC and

its Member Countries, as well as other producing countries outside OPEC,” he declared.

Looking at international organizations that could benefit from relations with the Energy Charter, Rusnák stated that on the producers’ side, OPEC had developed into an organization that was interested in issues of global governance. There were a number of instances where the Organization had intervened in the global oil market in an effort to stabilize it.

There was also the Gas Exporting Countries Forum (GECF), a gathering of the world’s leading gas producers, which was also established as an inter-governmental organization with the objective of increasing the level of coordination and collaboration among the gas-producing countries.

From the consumers’ side, said Rusnák, there was the International Energy Agency (IEA). Over the last 20 years, the IEA had evolved as an instrument to ensure security of supply for the developed world into one that addressed energy security in a broader sense.

Rusnák pointed out that the IEA had stepped up its cooperation with the emerging economies to take account of their growing significance. But the agency remained oriented to the interests of the energy consumers.

Other organizations included the World Energy Council and the International Energy Forum (IEF).

He maintained that the added value of the Energy Charter was its legally binding rules, which were of major significance for further investment in the energy sector and to secure reliable transportation routes and promote market access.

Energy Charter provisions covered all forms of energy and generation, including low-carbon solutions and renewables. The Charter had more flexible and informal instruments at its disposal in the form of various groups and subsidiary bodies, which covered a substantial area of the Treaty.

“Experience shows that dialogue around the critical energy issues can do much to promote a better understanding, transparency and exchange of information and, in these ways, contribute towards building confidence among the players in energy cooperation globally.”

Rusnák pointed out that the Energy Charter Treaty was the only international treaty that explicitly proclaimed state sovereignty over a country’s energy resources.

The treaty contract parties recognized state sovereignty and sovereign rights over energy resources.

Contracting parties were free to choose the governing system of property ownership of energy resources.

Furthermore, he said, each state could freely decide the geographic areas to be made available for exploration and development of its energy resources and the rate at which they may be exploited.

Contracted parties may specify and enjoy any taxes, royalties or other payments for exploration and exploitation. Resource-owning states also had the right to regulate the environmental and safety aspects of such exploration and development.

Rusnák noted that the OPEC Secretariat estimated that in the medium term, some 140 projects at an estimated cost of around \$155 billion were being undertaken by OPEC Member Countries.

Such projects were in addition to all energy infrastructure schemes, such as pipelines, export terminals and downstream expansion schemes at a global level.

“Energy-producing countries, including OPEC Members, clearly need to attract large-scale investments and work with international partners to promote investment flows in the region,” Rusnák maintained.

He said there were many areas of uncertainty regarding investments, such as that over the inconsistency of demand, changing regulation, fiscal regimes and strategic and political factors.

“There is a need for sustainability and harmony in the long term, as well as certainty and consistency of the future level of demand. Transparency, constellation and planning are required to meet the challenges posed by these factors.

“This involves all energy producers, consumers, energy companies, financial institutions and other interested parties.

“In other words, it involves cooperation on an unprecedented, immense, multilateral and sustained basis. In addition to the efforts of national governments, an interdependent energy world needs institutions to promote coordination and provide a stable framework for cooperation. The Energy Charter Treaty is such an organization,” observed Rusnák.

He stressed that the Charter’s framework of international rules and principles was already well established, effective and widely supported.

At the same time, the Charter process was flexible and ready to respond to the new challenges.

Rusnák explained that once an energy investment was made, the Treaty was designed to provide a stable interface between the investment and the host government.

“Stability is particularly important in the energy sector where investment is highly strategic and capital-intensive, where the risks have to be assessed over the long term. The reduction of the

investment risks and the creation of a stable and transparent investment climate is a major challenge.”

Rusnák maintained that the Energy Charter Treaty assisted in this respect by offering binding protection for energy investors against key known commercial risks.

The Charter’s focus was on fixed infrastructure, including pipelines and grids, or LNG terminals. New energy players in consuming countries had a clear interest in securing oil supplies by pipeline.

“Even for OPEC Members, who all have access to the sea, pipelines are in some cases the more cost-effective option, providing the basis for close partnership with other countries,” observed Rusnák.

He stated that the Energy Charter’s ambition was to facilitate new infrastructure projects, not only to increase energy security, but in particular to allow the development of a regional solution also for alternative energy producers, transit and trade.

“I would very much welcome the participation of OPEC and its Member Countries to our future discussions which are aimed first and foremost at balancing the interests of the energy producers and consumers and to increase mutual benefits.

“Under my direction as Secretary General, the Energy Charter Secretariat, in cooperation with member states, is developing a target expansion policy. This is another important component of the modernization process.”

Rusnák made it clear that strong political support from all members would be provided. Those countries that had observer status to the Conference had an entitlement to participate in the negotiation on the Energy Charter protocol and declaration authorized by the Energy Charter Conference.

“In the fast-changing energy world, reflection is required. As to whether the existing arrangement for energy governance is sufficient to meet the full range of the new challenges, today’s challenges point to the need for further creative thinking by all the players.

“The Energy Charter process is flexible and ready to respond to the new challenges. I hope that OPEC Member States will take this opportunity to contribute to the development of the Energy Charter process.

“The engagement of the Member States of OPEC with the Charter would do much to enhance the standing of the Charter globally,” concluded Rusnák.



Alan Crain

“We are committed to the continuous evolution of our technology to optimize performance for you, safety for all of us and environmental stewardship for all the world.”

— Alan Crain

The final guest speaker of the fourth session was **Alan Crain**, Senior Vice President of Baker Hughes, who highlighted just how important new and innovative technologies were for the future of the petroleum industry.

He told the Seminar that the energy industry was in a period of great challenge and change.

To produce more oil, the trend was towards more complex and extreme environments, such as deep water and mature reservoirs. For gas, shale reservoirs were of great importance.

Crain disclosed that at Baker Hughes, its 58,000 employees oversaw 21 product lines, 75 sub-product lines and over 2,000 product families.

The company had operations in over 80 countries “to support its customers and its friends” at the national oil companies (NOCs) and international oil companies (IOCs).

“We focus our technology investment on the products that you need, that you want, and to provide also the support that you need every day.

“We have all seen a new paradigm for technology in our industry, well known technologies such as horizontal drilling and horizontal fracturing and horizontal drilling, combined in an innovative fashion to unlock a previously unavailable source of supply — shale.”

Crain stressed that the Baker Hughes enterprise technology strategy was market-focused and research-enabled. “Our objective is to employ technology to unlock market potential, to reduce your risk and increase efficiencies. To obtain these objectives, we employ an enterprise research strategy built around four themes — sustainable chemistry, high-performance information, advanced measurement and actuation and designer materials.

“Under these themes, we operate focused research projects to produce new technology for deep water, high temperature, high pressure and unconventional and conventional oil and gas markets.

“Our global network of technology centres places innovation close to our customers. We connect our experts in every phase of the business directly to our customers, regardless of where they may be, anywhere in the world and at any time.”

Crain pointed out that, today, there was more collaboration than ever before. Currently, Baker Hughes had numerous major collaboration projects ongoing at both NOCs and IOCs.

One-third of those projects were in fundamental and applied research, while two-thirds were in product development.

“We are also actively engaged with NOCs and IOCs on technology enabled brownfield developments to rejuvenate mature fields.”

Crain stated that, earlier this year, the company opened its 11th regional technology centre in Dhahran, Saudi Arabia, “where we work with customers to address challenges throughout the Middle East.”

He continued: “Our innovation centres are the heart of our research and development efforts. They drive research and development, synergy and promote collaboration across all product lines.

“We continuously work to expand our capability. For example, at our Centre for Innovation and Technology in Houston, Texas, we can test products at up to 40,000 pounds per square inch (psi) and at temperatures of over 370°C.”

Crain said that Baker Hughes’ significant investments and testing capabilities helped ensure reliable product performance in strategic areas, including unconventional oil and gas and extreme high-temperature and high-pressure environments, and the deep water.

“This also furthers our reservoir knowledge and helps in designing programmes for you with your reservoirs to maximize your productivity and ultimate production and also our remote monitoring and optimization programmes.

“This all allows us to further increase our new product development and to further increase collaboration with you, our customers.”

For Baker Hughes, said Crain, in areas of technology, research was extremely interesting at the moment, as was fundamental chemistry, in which it was creating a new set of greener, more environmentally friendly options for many activities, both in well construction and product enhancement.


Complex fluids were increasing recovery, while reducing environmental impact, while, in material science, the company was creating technology solutions for the industry’s greatest challenges and frontier environments, extreme temperatures and pressures and aggressive corrosive environments.

“We are utilizing nanotechnology extensively and in enhanced digitalization, we are using high-performance computer clusters for real-time simulation and design and we put automated equipment in customers’ wells and have centres and experts for real-time monitoring of our operations.”

Concerning product development at Baker Hughes, Crain said the firm had adopted a scientific system to evaluate both its own chemicals, as well as those of its suppliers.

“Our smart care fluids system provides operators with a choice of environmentally preferred chemical products. Our operators can use smart care data to meet regulatory requirements, as well as to choose products without compromise to the productivity goals and environmental stewardship.

“At Baker Hughes, we are cognizant of the potential impacts associated with industry activity, the welfare of our workers, our customers and the communities we live in and the entire world environment. These are of paramount importance.

“We are committed to the continuous evolution of our technology to optimize performance for you, safety for all of us and environmental stewardship for all the world,” he concluded. 

Panel Discussion

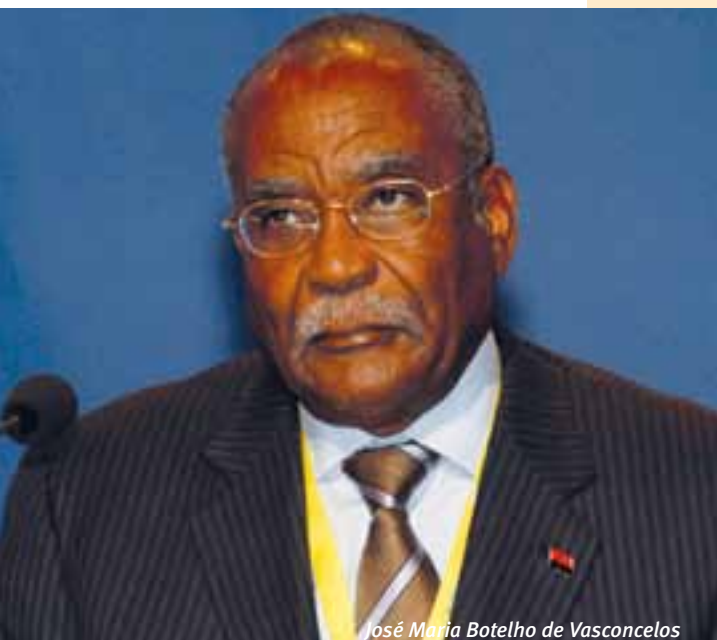
Petroleum for Progress and Cooperation

Themes

- The role of oil within the global energy scene
- Importance of multilateralism in stabilizing the world oil market
- Petroleum in a changing world economic landscape
- Energy poverty and the quest for development



L-r:
 Michael Lynch, President, Strategic Energy & Economic Research, Inc
 Abdul-Hussain Bin Ali Mirza, Minister of Energy, Bahrain
 José Maria Botelho de Vasconcelos, Minister of Petroleum, Angola
 Aldo Flores-Quiroga, Secretary General, IEF
 Christophe de Margerie, Chairman and CEO, Total (at lectern)
 Prof Oysten Noreng, 2012 OPEC Award Recipient for Research



Chairperson

José Maria Botelho de Vasconcelos

Minister of Petroleum, Angola

Panelists

Abdul-Hussain Bin Ali Mirza

Minister of Energy, Bahrain

Aldo Flores-Quiroga

Secretary General, IEF

Christophe de Margerie

Chairman and CEO, Total

Michael Lynch

President, Strategic Energy & Economic Research, Inc

Prof Oysten Noreng

2012 OPEC Award for Research Recipient

The Chairman of the Panel Discussion was **José Maria Botelho de Vasconcelos**, Angola's Minister of Petroleum, who said the theme of the session, 'Petroleum for Progress and Cooperation', challenged participants to discuss a whole range of issues — from the role of oil in the global energy scene, right through to energy poverty and development.

"To meet these challenges, I can call upon five excellent speakers. They will go a long way to providing answers to our challenges," he affirmed.

In brief comments before introducing the speakers, the Minister said that there was no doubt that oil would continue to be crucial to the global energy scene for the foreseeable future.

"To be sure, natural gas and renewables will grow in importance and coal will remain a mainstay of the energy balance, but oil will remain overwhelmingly dominant in the transport sector and for this reason our industry remains central to global economic development," he maintained.

De Vasconcelos stressed that OPEC was acutely aware that supply and demand for oil and its price were

"OPEC Ministers constantly strive to ensure reliable oil supply at a fair price that rewards investors in capital-intensive projects, but which does not impose an unfair burden on the consumers."

— José Maria Botelho de Vasconcelos

both crucially important to the health of the global economy.

"OPEC Ministers constantly strive to ensure reliable oil supply at a fair price that rewards investors in capital-intensive projects, but which does not impose an unfair burden on the consumers," he said.

The Minister stated that the cost of fuel was important for importing countries, but for the very poorest it was absolutely crucial.

With nearly two billion people living on an income below \$2/day, he said, "we have a responsibility to help them improve their lives and see that their countries grow and develop."



Abdul-Hussain Bin Ali Mirza

Looking at the progress made in the petroleum sector in the Gulf region over the years, particularly in Bahrain, the country's Minister of Energy, **Abdul-Hussain Bin Ali Mirza** informed delegates that just two weeks before the Seminar, Bahrain had celebrated the 80th anniversary of the first discovery of oil in the Gulf Cooperation Council (GCC) region — at Jebel Dukhan in Bahrain.

"The humble beginnings of producing four barrels per day in 1932 led to the discovery of about 44 per cent of the world's oil reserves and 24 per cent of the world's gas reserves in our region," he affirmed.

That discovery in 1932, he said, sowed the seeds towards the region becoming the main supplier of the world's "insatiable energy needs", fulfilling the OPEC Seminar's theme of *'Fuelling Prosperity, Supporting Sustainability'*.

Mirza pointed out that the oil industry in the Gulf region had grown to what it was today and great strides had been made in Bahrain over the years.

He noted that the Bahrain Petroleum Company was formed by Chevron of the United States in 1929 and the first discovery was made on June 1, 1932. In 1936, the first refinery in the GCC was built in Bahrain and in 1997 the Bahraini government took over the Bahrain Petroleum Company.

"For our industry today, the cost of finding oil has increased several-fold over the past few decades. This largely contributes to the high oil prices we experience these days."

— Abdul-Hussain Bin Ali Mirza

In 2005, the political leadership restructured the oil and gas industry in Bahrain, eliminating the Ministry of Oil and replacing it with a National Gas and Oil Authority (NOGA), of which he was honoured to become Chairman,

In 2007, the NOGA investment arm was formed and in 2009 Tatweer Petroleum was incorporated.

"The idea of NOGA was to think outside the box — to be creative and challenge the status quo. Over the last seven years of NOGA's experience we have expanded our portfolio of companies, aligning with our national vision called 'Bahrain Vision 2030', which aspires to diversify our economy, provide educational opportunities for our youth and improve the standard of living of all our citizens," he stressed.

Mirza said that despite the events that gripped several countries in the Middle East and North Africa (MENA) region, Bahrain included, the march towards achieving that goal of Bahrain's vision continued on track.

He maintained that the OPEC Seminar's theme was extremely timely and addressed two critical issues facing humankind.

These comprised prosperity — improving the living standards of the billions of inhabitants on the planet — and sustainability, meaning achieving prosperity through conscious efforts to protect the environment.

"In a world that will reach ten billion people within three decades, we have to find solutions to issues such as climate change, ozone layer depletion, global warming, biodiversity loss — all resulting from the increased use of fossil fuels," he asserted.

"The basics that are relevant to our discussions here are demand and by extension supply and pricing," he added.

Mirza said it was well known that the world would have encountered an economic catastrophe, were it not for the new engines of economic growth in Asia and the Middle East.

Demand growth for energy, in general, and for oil, in particular, was driven by these economies, he pointed out. Over the past decade, he observed, growth in demand from the East was nearly six times higher than that of the West.

“This trend is expected to continue. We live in a world that is increasing its usage of energy.

“Even today, when we still find ourselves in the midst of a recession that has dampened usage in the West, a slowing in the emerging economies, such as China, and the introduction of fuel conservation and renewable energy, experts and industry watchers still predict that oil demand will increase to over 100 million barrels/day within perhaps a decade.”

Mirza said that, of this amount, 45 per cent would have to be supplied by the Members of OPEC.

“The world is watching very closely and with great anticipation the decisions that OPEC will take in Vienna this week,” said the Minister, referring to the OPEC Conference, which was held immediately after the Seminar (*see page 8*).

He said that the other basic was price. Looking historically, crude oil prices had been relatively well-behaved for at least one century between the mid-1870s to the mid-1970s, averaging about \$14/barrel in real terms.

“Since that time, however, and especially since 2008, the story changed and volatility in oil prices has become a fact of life in the industry,” noted Mirza.

“For our industry today, the cost of finding oil has increased several-fold over the past few decades. This largely contributes to the high oil prices we experience these days.”

Referring to the World Energy Outlook for 2010, Mirza said this presented the stark prognosis that even with all the efforts being made about 1.2 billion people would still be without electricity by 2030.

He said that in order to address this issue, the world would need to invest €30 billion, or \$38bn by governments and/or non-governmental organizations (NGOs), each and every year until 2030.

According to data from the World Bank, he said, the amount of €30bn being talked about was higher than the GDP of over 100 of the world’s smaller nations, or weaker economies.

Returning to Bahrain’s domestic outlook, Mirza explained that the main motivation for the formation

of Tatweer Petroleum — a joint venture between NOGA Holding, Occidental Petroleum and the Mubadala Development Company — was to reverse the decline in production of oil from the country’s 80-year-old field — Jebel Dukhan.

This, he explained, was to be done by employing the enhanced oil recovery technologies of its partners, Occidental and Mubadala.

“Today, I stand here proudly to say that since its inception in late 2010, Tatweer has already drilled 240 development wells, a significant achievement in such a short time, when compared to the total of 800 wells that were drilled in Bahrain during the entire last 70 years.”

Mirza disclosed that, to date, their activity had resulted in an increase of 15 per cent in the production of domestic oil over the immediate pre-Tatweer period.

“Some of these wells will be drilled to depths not previously achieved on the island, namely the deep gas formations lying between 15,000 and 20,000 feet.

“We are also pursuing other initiatives with vigor. For example, we have formed the Energy Conservation Committee in April 2006 to promote the rational use of energy and formulate energy conservation policies.

“We have also joined together with the United Nations Development Programme (UNDP) to establish an energy centre responsible for the planning and implementation of energy conservation and renewable energy.

“Also, NOGA has just signed a letter of intent with an American company to install a 5MW solar power plant in the oil town of Awali. And negotiations are ongoing with another firm to install another pilot plant using wind power.”

Mirza pointed out that to achieve all the objectives set out, Bahrain would need the cooperation of all stakeholders.

National oil companies would have to provide access to the reserves and make available part of their considerable financial capacity, while the international oil companies, in their turn, must provide the technological and managerial skills and know-how.

“The synergy between the two partners will guarantee that the challenges faced by the industry will be overcome. But this will not be possible without all stakeholders, academia, governments and the industry working together to educate and train the future generation of skilled geologists and engineers, pipefitters, chemists, welders and marketers,” he concluded.

Building trust between oil producers and consumers is one of the main thrusts of the International Energy Forum (IEF), based in Riyadh, Saudi Arabia. This was one of the main messages put forward by



Aldo Flores-Quiroga

“At the IEF, we try to reduce the level of uncertainty surrounding the future of the oil industry through dialogue and more conversation.”

— Aldo Flores-Quiroga

the IEF’s Secretary General, **Aldo Flores-Quiroga**, the next speaker.

He told the panel that the IEF formed part of a set of institutions that tried to advance energy conversation.

Today, he explained, The Forum comprised 98 countries from six continents which together represented about 90 per cent of the oil and gas markets in the world.

“It includes countries from the IEA, OPEC, the BRICS and other important players that have much to say about what is going on in the energy world,” he affirmed.

Flores-Quiroga pointed out that the IEF promoted a dialogue that was neutral, informed, inclusive, informal, focused and open.

“It is very ambitious to try and accomplish all of this in a conversation that involves 98 countries, but we are seeing progress in this type of engagement as we move on in a process of managing better the complex interdependence that is now characteristic of the energy world,” he stated.

“We aim to build trust between producers and consumers and, in so doing, we want to promote security of supply and demand. The conversations are partly to

obtain better information and a better understanding of what is going on in the oil markets. Our view is that dialogue delivers data and vice versa.”

The IEF head maintained that there were three key questions in “this dialogue of ministers”.

First, they needed to explain the behavior of oil prices, why they observed the volatility that they were seeing in the markets.

The second involved what the oil supply and demand balance was.

And the third question was more about the long term and the outlook — what they could expect of future energy demand and supply.

“When people talk about excess volatility, we have seen that price spikes coincide with more intense discussions about what is going on in the oil market and they coincide also with calls for the IEF to facilitate a more engaging conversation,” observed Flores-Quiroga.

Looking at the crude oil supply and demand balance in the first quarter of 2012, he said estimates were varying at around two million barrels/day.

“Of course, each estimate response is to a different methodology and a different analytical purpose, but it is an interesting question when you have such a range of uncertainty regarding how comfortable you can feel in respect to the balance,” he affirmed.

Regarding the outlook, Flores-Quiroga said that if one took the smallest estimate of the IEA and the highest estimate of OPEC, “you are going to see a range of close to 30m b/d in estimates as what is going to be the demand in the next 25 years.

“At the IEF, we try to reduce the level of uncertainty surrounding the future of the oil industry through dialogue and more conversation.”

Regarding what the IEF was finding out through its dialogue, Flores-Quiroga said that with the 89 countries that were involved in the initiative, together with the participation of many companies and the input of national organizations, with respect to volatility, “we are finding that a consensus is very elusive.”

Some found that the financial markets were behind the new shape of volatility, while others believed it was down to the fundamentals, where the interaction was much more complex.

“It is not a settled discussion and this issue will continue be part of the focus of our discussions at the IEF.



Christophe de Margerie

“With the global population growing, we have to get access to more and more oil and gas reserves. These do exist, but it will take more time, it is more complex and it needs additional technology.”

— Christophe de Margerie

challenging process and we hope that, through our conversations, we will start to develop more concrete answers.”

Flores-Quiroga pointed out that the objective was not to reach one single answer, but to understand better what the differences were to finding where the common interests lay and to advance the conversation so that there was much more awareness that “we live in an interdependent world and that much better and closer and intense cooperation is required to address our energy challenges.”

“There is a strong consensus that we need more transparency. Basically, everyone supports transparency, but what we have to do at the IEF, together with our partners in the Joint Organizations’ Data Initiative (JODI), that includes the IEA, OPEC, OLADE, APEC, EUROSTAT and UN Statistics, is to make sure that this consensus becomes a reality.

“It is not easy — the challenge is to bring information together from all these countries that have very different legal frameworks and very different methodologies.

“But we are making progress, nevertheless. We already have the oil part of this transparency initiative and we have begun to extend it to the gas markets.”

The IEF head stated that, with the outlooks, the Forum was working with the IEA and OPEC to understand better what the differences were.

“It is clear that we need to explore much more. For example, in the conversations we hold every year with experts from the IEA and OPEC, we need to know more about the demand growth in China, India and the Middle East.

“We also need to understand better what is behind the cost and price assumptions in the outlooks, where the elasticity assumptions for supply and demand are, and what are their projections for the different types of fuels that are going to be used.

“It is also very important that we understand better the sources of data that are being used. This is a very

With almost four billion inhabitants out of the world’s seven billion population having no access to modern energy, **Christophe de Margerie**, Chairman and Chief Executive Officer of France’s Total, outlined in his panel remarks how his company was helping to address this situation against a background of rising energy demand.

He told the panel that really, in a way, nothing much had changed. There was still the need for more energy — the difference was it was moving from the West to the East.

“But, at the same time, the reserves are not moving so quickly. And definitely geology does not move in the same way that a population can grow,” he said.

“With the global population growing, we have to get access to more and more oil and gas reserves. These do exist, but it will take more time, it is more complex and it needs additional technology.”

De Margerie maintained that one needed to attain the capacity to challenge the geopolitics concerned, as well as the security concerns.

“Our job as national oil companies (NOCs) and international oil companies (IOCs) is to get the energy to our clients. Whatever the figures will be going forward, we will be faced in the years to come with the same concerns — more oil and more gas, but in a cleaner way, in a way that is acceptable,” he maintained.

De Margerie said that, at the same time, there were still some changes taking place, thanks to unconventional oil and gas.

“That has definitely changed some of our uncertainties. We have to be very careful in the industry. Sometimes we can be too certain and sometimes we are wrong.

“For instance, what is happening in the United States, both with oil and gas. Unconventional oil is totally changing the fact that now

the US is totally self-sufficient in gas and definitely less dependent on oil.

“To what point could that have an impact on the global balance and what could be the impact for OPEC Members is something that needs to be discussed,” he affirmed.

The Total head reiterated that all the changes were coming from unconventional oil.

“Is it new? No. Were we aware of the existence of unconventional oil and gas resources? Yes we were. But we were not certain that we could develop them with such speed.”

De Margerie noted that of great importance in this regard had been the level of the price of oil and that of gas, which had permitted things to be done which were considered as undoable not so long ago.

He said that almost 30 per cent of future oil would come from unconventional sources, while, for the gas industry, some 50 per cent of the resources would come from shale gas, or unconventional as a whole.

“This is definitely changing the picture and changing the balance between East and West in the emerging countries and the non-emerging countries and the role of the Middle East,” he observed.

De Margerie said that the other question was how to work together, “which in my view is part of the acceptability. This acceptability is a must.”

He stated that one way of looking at it was through the cooperation of the NOCs and the IOCs.

“But I think we have to be more and more careful of the split between NOCs and IOCs. For example, comparing Saudi Aramco and the China National Petroleum Corporation (CNPC) there is nothing different, officially they are both NOCs.

“So I prefer to say we are partners, some have more resources than others, some may have different technologies and the only real difference is shareholding — Saudi Aramco, for example, is 100 per cent owned by the Kingdom of Saudi Arabia.

“That is not the same for others, but, in the end, we all have the same concern — to bring additional oil and gas to our clients.”

For this, stressed de Margerie, cooperation was not only needed in the host countries, it was also required outside the host countries.

“It is this kind of strategy and policy that Total has been developing for many years — and we are not the only one. Our partnerships with NOCs are strategic, but, at the

same time, they are not just with two or three NOCs, but with many, mixing them and being competitive in parts of the world which are not always easy.”

De Margerie said that, in this way, they were sharing the risk. “In the end hopefully, we are successful.”

He said that, each year, Total entered into additional joint ventures and additional partnerships, “a success that is working in all countries.”

He continued: “But definitely we need to develop our activities. Building trust is a top priority. We know what happened to Japan and in the Gulf of Mexico. Any company can be affected in such incidents and we have to protect the environment.

“It is all part of building trust. It is our duty to prove that leaks should not happen, but if they do happen, we need to show that we have the capabilities to manage them, to monitor them.

“In the end, we need to consider that, with the new technologies, it is still a risk — an acceptable risk — but we are developing new reserves.”

De Margerie pointed out that access to reserves was access to energy. Almost four billion inhabitants out of the world’s seven billion had no access to energy.

“What can we do about this? Well, we need to change the way we think. We need to change the fact that, okay, we are oil and gas companies, but, at the same time, we are energy companies.

“We cannot say that solar is no good, that wind is no good. But, at the same time, we have to say that fossil energy will remain the priority for many years.

“So the best way is to prove that you also share the responsibility of having access to new energies, but to do it in a way that is considered to be acceptable.

De Margerie said it was a fact that oil and gas were the best sources of energy. “But we will only be accepted and trusted if we at least prove that we spend time and effort to see what else can be done.

“So let us do it and let us do it in a way that is shared with our partners, especially the NOCs. This is one of the keys to the success of a long-term partnership.”

De Margerie explained that part of the success of a company like Total and others was to develop activities in a country where “we just don’t do something as a service company, but we play a role as a long-term investor.”

Concerning Total’s initiative to produce and provide solar lamps for different parts of the world, he said the



Michael Lynch

“Oil is finite, but money is infinite. You can print all the money you want. It is not a question of finite or infinite, it is not a question of recent short-term costs — there is still lots of oil and there is a potential for costs to come down.”

— Michael Lynch

plan to have one million lamps available for five million people by 2015 may be a small number, but it was a huge initiative and the people receiving the lamps were very happy and were asking for more.

“They trust us — that is acceptability — and it shows that we can do something in difficult parts of the world where our technology can be used in a simple manner. In the end, with small streams you are building large rivers,” he concluded.

Following on from the previous speaker, **Michael Lynch**, President of Strategic Energy and Economic Research Incorporated, told the panel that it would be good if the energy impoverished in the world were able one day to afford commercial energy.

He stated that many people talked about ‘new energy’, but in his opinion, the world needed more than just new energy, or good energy — “we need to think about efficiency, and not just energy efficiency, which is good, but economic efficiency, which is paramount.”

Looking back, he said, everybody in the late 1970s and early 1980s, except for a handful of academics, thought that oil production was close to a peak — that prices could only go up and that demand was never going to be affected by price, etc.

“Essentially, everybody was completely wrong, not just about the politics and technology, but about the economics.”

Lynch observed that, nowadays, people saw the floor

price for oil at about \$80 a barrel. The same group a few years earlier said the ceiling was \$30/b.

“The lesson here is that forecasting is very hard and one should be tolerant of mistakes to a certain point and also be open-minded and skeptical.”

Lynch noted that costs had also gone up and most of these costs seemed to be cyclical. Costs were flat for years and they only started to rise about five years ago.

“This does not suggest that we suddenly went into deep water, or suddenly went into high-cost projects, but that the higher activity rate, plus the higher import costs, drove prices up and the cost for the upstream sector,” he maintained.

Over the years, said Lynch, the economics had not really changed that much. Oil was finite, but money was infinite. “You can print all the money you want. It is not a question of finite or infinite, it is not a question of recent short-term costs — there is still lots of oil and there is a potential for costs to come down.”

He pointed out that electric cars were an extremely expensive way to reduce automobile emissions by one-third.

“It is not that they are just toys for boys; they are bad toys for rich boys. It is bizarre that we have billions of people who do not have decent heating fuel and we are giving Hollywood movie stars \$10,000 so that they can buy an electric vehicle. I just cannot support that kind of thing.”

Lynch stated that, for transportation, oil products were still by far the best way to go in terms of economic efficiency, which included environmental efficiency. And with energy poverty, he said the people who used biomass for cooking fuel caused all sorts of health problems, beyond the deforestation problem.

“People would be much better off, the environment would be better off if they had access to propane and kerosene. Natural gas is much cleaner than coal for power and it is also cheap.

“It is the economically efficient solution in places like China and India and elsewhere if the price is right.”

Lynch said that when one looked at supply forecasting, the typical forecast was that past recent trends would continue.

"But trends change sometimes and we are starting to see a boom in Iraqi production and, depending on what demand for OPEC oil is, this could cause problems in the longer run."

Lynch said there was also a lot of oil in Brazil and there was a lot of oil offshore West Africa and East Africa, while shale was becoming very important.

"There is a lot of shale oil and gas and I think we will see shale gas production in Central and Eastern Europe, places like Poland and Ukraine and China, and this is going to put a lot of pressure on internationally traded gas," he maintained.

Lynch observed that people had found shale oil in a lot of places and it seemed that development costs now were at about \$60/b.

"Shale is not cheap — it is a moderate cost. It is more expensive than Middle Eastern oil and gas, for example, but it is cheaper than conventional gas in the US.

"So, it is relatively cheap and it can be done cleanly, but it does take a lot of time and effort. I think in the longer term that is going to be a major portion of our supply.

"The question is, what will that do to the market? Well, that depends in part on demand. We are in a period of recession and we do not know where the demand growth is actually going to end up.

"If you were to ask the average American energy economist what the price effect is on demand, you would get three different answers — so we do not know where it is going."

Lynch maintained that with high crude prices, it was hard to believe that demand would grow very robustly.

"When we had high prices in the past we had a strong collapse in demand for OPEC oil. But when prices dropped, we saw a boom in demand for OPEC oil.

"Lately, it has been more flat and there is a concern that maybe it may decline again. This suggests to me that a price of \$100/b for Brent crude is possibly unsustainable.

"So what is going to happen? Do we go to economic efficiency? I think this is going to be a bit like the 1980s. We will see prices come down to maybe \$50-60/b.

"And the enthusiasm for clean technology will tend to diminish as we see things like solar and electric cars go back to the research and development stage, with subsidies being removed.

"I think this will be bad for some people in the industry and very expensive projects will be generally abandoned. Otherwise you will see pressure on the upstream sector and the drilling rig companies will see their costs forced down, and the rig rates forced down."

Lynch said he thought LNG trade was a big concern because the production of gas in most places was cheap, but its transportation and liquefaction were expensive.

"I think LNG trade is close to a peak and you are most probably going to have to have much lower prices just to keep that going. The good news is that if prices are lower, demand should recover.

"It would be nice if the energy impoverished would then be able to afford commercial energy and we would see a great expansion of that. In that sense, the oil industry has a great future," he concluded.

The final presentation of the OPEC Seminar was made by **Prof Oysten Noreng**, winner of the 2012 OPEC Award for Research.

In comments regarding his extensive experience in the international oil industry, and appreciation of OPEC, he told the panel that he had started working in international oil and gas matters at a very early stage, first as a student in Paris, and then studying petroleum.

"In my view, OPEC has been so successful and so necessary. If it had not been created by the producers, the consumers would have had to do something," he professed.

He noted that in 1973, the United States took the initiative to create the IEA as a counter organization to OPEC. "The idea was to keep the import price of oil low."

In stressing that OPEC was still a very important element in the world economy, Noreng said that oil was the most important traded commodity in the world.

"This means that the price of oil still influences trade balances and inflation rates and quite a few other things, including employment figures," he maintained.

He stated that oil, because of its versatility, competed against practically all forms of energy. "Therefore, the price of oil is the mother of all energy prices. That is still the case."

Noreng observed that when the price of oil went up, other things became more affordable, more economical. But when the price of oil went down, other things became less affordable.

"Then you have OPEC, which is the mother of the oil price, but not entirely. OPEC is more of a stabilizer than anything else."

Looking at investment, Noreng said that what investors needed, whether they invested in energy efficiency,



Prof Oysten Noreng

“In my view, OPEC has been so successful and so necessary. If it had not been created by the producers, the consumers would have had to do something.”

— Prof Oysten Noreng

or in oil, gas, or other new energy sources, was predictability and stability.

“Volatility is very harmful to the investment climate. This is the big service that OPEC has done for the world in bringing about some kind of stability. It is not perfect, but better than what would otherwise have been the case.”

Looking back, said Noreng, of course the consuming world was shocked that the price of oil could quadruple in a few months in 1973.

But the existence of OPEC facilitated investment decisions in Alaska, the North Sea, natural gas, in coal, in nuclear, without which the consuming countries would have been worse off some years later.

“So we should thank OPEC for that,” he affirmed.

“Then we had the very high oil prices in the 1980s. The price of oil hit \$40 per barrel for a short time in the early 1980s. In real terms the price was almost as high as it had been in recent times.

“OPEC did not manage stabilization at that time. You cannot police demand. And at that time demand fell. In 1984-85 Kuwait and Saudi Arabia were producing less oil than Norway and the United Kingdom.

“This was an absurd situation. High-cost marginal producers had a larger market share than the low-cost key producers. Of course, this could not last.”

Noreng stated that this meant you could not police a market. OPEC was not triggering or manipulating the market, it was a stabilizer. The price of oil had to go down, he said.

“After 1985, we had a period of almost two decades when, in real terms, oil prices declined. There was a surplus of energy in the world. In the 1990s, when oil prices were still low, OPEC was struggling and there was little investment.

“Then, because of an unexpected rise in demand, and because of the sluggish investment, oil prices rose.”

Noreng said that in 2003, OPEC had a price band of \$22–28/b. “The market did not believe in it. In June 2003, you could buy a forward cargo of oil to be delivered in 2010 for \$20–21/b. Only the year after, did prices rise to \$45/b and they went on and on.

“That was not OPEC’s fault,” maintained Noreng. “The Organization was just following the market. To many, there was great concern.”

He stated that, in this way, “we can see that there are forces other than OPEC — the financial markets, political events, wars etc — which really triggered the major price rises.

“Then OPEC tries to stabilize prices to the benefit of the consumers as well,” he pointed out.

Concerning the current challenges, Noreng observed that when prices went up far higher than the cost of production, something happened.

“In its competition with other energy sources, conventional oil has a disadvantage when it is highly priced. For the producers it can be beneficial, but we should know that we may be headed for a long period where supplies could increase more than demand. And we know what that will mean for prices,” he affirmed.

Noreng said there were other transitions to consider. Partly because of unconventional oil and partly because of more efficient use of energy, North America was about to become fairly self-sufficient in oil.

“Not entirely, but in Canada, Mexico and the US, the total of these three may not be importing very much oil five to ten years from now. That will mean that international oil trade and intra-regional oil trade, increasingly, will be centered on China.

“And this will mean that the US will be marginalized in oil trade. China will be central.”

Noreng pointed out that China’s policy was to conduct an ever larger share of its foreign trade in its own currency.

“What we need now in this transition is cooperation and understanding. In this respect, I would like to pay tribute to OPEC for arranging this Seminar,” he concluded. ❖

OPEC Seminar proved to be “absorbing and educational”

— Qabazard

The closing remarks to the 5th OPEC International Seminar were made by Dr Hasan M Qabazard, Director of the Organization’s Research Division, and Chairman of the Seminar Steering Committee. In his comments, he pointed to the fact that the “absorbing and educational” event had enabled everyone taking part to take a fresh look at many of the challenges facing the oil industry. He also took the opportunity to thank all those who contributed to making the Seminar such a resounding success.



“We shall all go away from this Seminar with key messages from the event, which has been attended by around 700 delegates,” Dr Hasan M Qabazard said in his closing remarks.

“These messages may vary among us, according to our role in this dynamic, exciting industry. But I am sure that many of you will agree with those we have identified here in OPEC,” he added.

Qabazard said the messages comprised the following:

- There will be steady energy growth to satisfy the needs of an increasing world population, projected to reach nine billion people by 2050. Most of the demand growth will come from the developing world, with China and India being the present front-runners.
- All forms of energy have a role to play in meeting this demand growth, and it is a global responsibility that should be shared by all energy-operators.
- Yet energy poverty remains one of the key challenges facing the global energy community, with many people having no access to modern energy services. I should mention here that the OPEC Fund for International Development has made energy poverty eradication one of its top priorities.
- Fossil fuels will continue to satisfy the major share of energy needs for decades to come. Oil will remain the number one source, with a growing share for natural gas.

- Energy resources are abundant, and advancing technology is central to delivering the new volumes, while improving environmental standards. Heavy stress should be placed on improving efficiency throughout the industry.
- Sound investment strategies are vital, bearing in mind the long life-times of many installations. These strategies, in turn, rely on maximum clarity, consistency and predictability about future market trends. Also, there is no single, optimal energy profile that fits all countries.
- When making long-term investments, one should look beyond the present-day problems of uncertain demand and shortages of funds. The long-term outlook for energy demand remains bullish and should provide the guiding light.
- There are three potential game-changers: shale gas and oil; alternative transportation technologies; and the development of LNG markets.
- The emerging 'shale revolution' has already given North America a new self-sufficiency in gas and this may also become true for oil in the next decade.
- While oil and gas consumption are moving East, oil and gas production are moving West.
- With regard to capacity expansion and investment, presentations on three OPEC Member Countries reminded us how different the challenges can be for different countries.
- The financialization of oil as an asset class has given rise to a huge increase in speculative activity and price volatility over the past decade. Financial markets need better transparency, regulation, accountability and oversight.
- The critical role of technology in protecting the environment is widely recognised. While energy efficiency is a cost-effective strategy, clean energy technologies are also important in reducing carbon emissions.
- Carbon capture and storage is an accepted proven technology, with already increasing industrial-scale projects. There are also CCS enhanced oil recovery applications with proven commercial value.
- The issue of human resources must be better addressed, to attract more young people to the industry to replace highly experienced, retiring generations.
- Collaboration in the industry, especially among IOCs and NOCs, is important for sharing expertise, mastering technology and managing the skilled manpower requirements. Enhanced energy dialogue among all major stakeholders is key to this.

Qabazard concluded by saying that no event like the Seminar was complete without thanking all those who made it happen. And this has been under the overall direction of OPEC Secretary General, Abdalla Salem El-Badri.

He said thanks were due to OPEC's host country, the Federal Republic of Austria and the City of Vienna, as well as the Austrian President, Dr Heinz Fischer, for his opening message; the distinguished chairpersons and speakers in each session; the moderators, John Deferios and Eithne Treanor; IBC Consultants, who had played a major role in the Seminar's organization; the specialist committees — namely, the Seminar Scientific Committee, the Seminar Organizing Committee and the Seminar Steering Committee — set up in the Secretariat as driving forces for the event over the past three years; and the many staff members who had been involved in their own significant ways during this period.

"Their combined efforts have ensured the event's smooth operation here in the magnificent Hofburg Palace. We thank all of them," he said.

Qabazard pointed out that the 5th OPEC International Seminar did not end there.

"In a sense, it is only just beginning. It is now up to all of us to think carefully about what we have heard here over the past two days, as we return to our places of work.

"If this, with the passage of time, helps the industry perform a little better than it would otherwise have done, then the Seminar has clearly been a success," he affirmed.



OPEC honours winners of 2012

Awards at celebratory gala dinner

No OPEC Seminar would be complete without the customary gala dinner, at which the Organization hosts and pays tribute to the event's high-level delegates, speakers and guests.

The contribution to the success of the Seminar by the event's top-caliber speakers — ranging from ministers from OPEC and non-OPEC Countries to heads of international oil companies and organizations — was made clear by OPEC Conference President and Iraqi Oil Minister, Abdul-Kareem Luaibi Bahedh, when he thanked everyone in attendance in his welcoming remarks to the dinner.

Held in the main festivities hall of the grand 'Rathaus' City Hall of Vienna, the seat of the Mayor of Vienna and the City Council, the dinner provides the perfect setting and opportunity for delegates to chat about the Seminar, its theme and topics, as well as the issues of the day.

And with so much going on in the international energy scene, with the new challenges facing the industry and the advent of numerous technological and structural innovations, there is always a great deal to talk about.

But the gala dinner is not only about relaxation and informal discussion — it is also recognizes excellence. It is the time when OPEC honours outstanding achievement with the presentation of two Awards — The OPEC Award for Research and the OPEC Award for Journalism.

This year, the OPEC Award for Research was presented to Prof Øystein Noreng of the BI Norwegian Business School, while the Award for Journalism went to a group of newsmen — Bloomberg's OPEC news team.

The presentation of the two Awards was made by the OPEC Conference President, together with OPEC Secretary General, Abdalla Salem El-Badri.



Prof Øystein Noreng receiving his Research Award from Abdul-Kareem Luaibi Bahedh (c), OPEC Conference President and Iraqi Oil Minister; and Abdalla Salem El-Badri (r), OPEC Secretary General.

The OPEC Research Award, the fourth in the series, was presented to Noreng in recognition of his life-long academic work in the field of energy economics and petroleum.

Similarly, the Journalism Award for was given in recognition of the hard work, detailed reporting, political acumen and understanding of economics of the Bloomberg OPEC news journalists. Established in 2004, the OPEC Award for Research honours analysts and researchers who have devoted their careers to the objective study, balanced analysis and understanding of the energy sector.

The OPEC Award for Journalism was established in 2009 to recognize journalists whose career has been devoted to the balanced and objective reporting of energy and petroleum and who have contributed to improving the public's understanding of the industry.



The OPEC Award for Journalism went to Bloomberg's OPEC news team.

Sponsors contribute to Seminar's success

The 5th OPEC International Seminar proved to be a resounding success, and, as attested to by the Chairman of the event's Steering Committee, Dr Hasan M Qabazard, Director of the Organization's Research Division, participants would take away a number of key messages with them concerning the "dynamic and exciting" global petroleum industry.

But the gathering would not have been possible without the support of the various sponsors, who, through their generous contributions, continue to make the Seminar one of the leading industry events of its kind.

OPEC Member Countries played their part in this regard. Even before the Seminar began, their support was in evidence with the pre-Seminar Buffet Dinner, held at Vienna's Intercontinental Hotel, being sponsored by the **Kuwait Petroleum Corporation (KPC)**.

Then, during the proceedings, lunch on the first day was paid for by **Saudi Aramco**, while, on the second day, the **Angolan Ministry of Petroleum** sponsored the lunch.

In between, a glittering Gala Dinner, held at Vienna City hall, was sponsored by the **Iraqi Ministry of Oil**.

But OPEC Member Country support did not end there.

The Seminar's coffee breaks were paid for by **Qatar Petroleum**, while the impressive stage set was sponsored by Venezuela's national oil company, **PDVSA**.

In addition, the provision of a convenient Internet Café at the meeting venue, the Hofburg Palace, was supported by **Libya's Oil and Gas Ministry**, while the Seminar's abundant documentation was paid for by Algeria's national oil company, **Sonatrach**.

And all the beautiful flower arrangements seen at the Palace were sponsored by the **Ministry of Non-Renewable Natural Resources of Ecuador**, which is famous for its roses.

All this support combines to ensure that the OPEC International Seminar remains at the pinnacle of international energy fora for years to come.



Ministry of Petroleum



Views from the Seminar ...

OPEC International Seminar



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1. Samir Salem Kamal, Governor for OPEC, Libya.

2. (l-r) Félix Manuel Ferreira, Governor for OPEC, Angola; Dr Bernard Mommer, Governor for OPEC, Venezuela; and Yasser M Mufti, Governor for OPEC, Saudi Arabia.

3. (l-r) Eng Diego Armijos-Hidalgo, Governor for OPEC and National Representative, Ecuador; Eng Goni Musa Sheikh, Governor for OPEC, Nigeria; Issa Shahin Al Ghanim, Governor for OPEC, Qatar, Chairman of the OPEC Board of Governors; and Seyed Mohammad Ali Khatibi Tabatabai, Governor for OPEC, Iran.

4. Ali Obaid Al Yabhouni, Governor for OPEC, United Arab Emirates (UAE).

5. Siham Abdulrazzak Razzouqi (l), Governor for OPEC, Kuwait; and Dr Falah J Alamri, Governor for OPEC, Iraq.

6. Austrian President, Dr Heinz Fischer (second r), with Abdalla Salem El-Badri (l), OPEC Secretary General; Ambassador Helmut Freudenschuss, Diplomatic Advisor to the Federal President; and Abdullah Al-Shameri (r), Head, Office of the Secretary General.



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7. (l-r) HRH Prince Abdulaziz Bin Salman, Assistant Minister of Petroleum and Mineral Resources, Saudi Arabia; Dr Rilwanu Lukman, former Minister of Petroleum Resources, Nigeria, and former OPEC Secretary General; Natiq Aliyev, Azerbaijan's Industry and Energy Minister; Hani Abdulaziz Hussain, Minister of Oil, Kuwait, and Alternate Conference President; and Abdurahman Benyezza, Libya's Oil and Gas Minister.

8. OPEC's management – (l-r) Oswaldo Tapia, Head, Energy Studies Department; Dr Hojatollah Ghanimi Fard, Head, Petroleum Studies Department; Asma Muttawa, General Legal Counsel; Fuad Al-Zayer, (then) Head, Data Services Department; Dr Hasan M Qabazard, Director, Research Division; and Alejandro Rodriguez Rivas, Head, Finance and Human Resources Department, in charge of Administration and IT Services Department. Not shown are Angela Ulunma Agoawike, Head, PR & Information Department; and Abdullah Al-Shameri, Head, Office of the Secretary General.



Views from the Seminar ...

OPEC International Seminar



1. OPEC Secretary General, Abdalla Salem El-Badri (r), fielding questions from CNN's Emerging Markets Editor, John Defterios, and Seminar moderator, John Defterios, and other media representatives.

2. Saudi Arabian Minister of Petroleum and Mineral Resources, Ali I Naimi (r), and Qatar's Minister of Energy and Industry, Mohammed Bin Saleh Al-Sada, seen at the lunch on the first day of the Seminar, which was sponsored by Saudi Aramco.

3. Kuwait's Minister of Oil, and Alternate OPEC Conference President, Hani Abdulaziz Hussain (r), with OPEC Secretary General, Abdalla Salem El-Badri at the pre-Seminar buffer dinner, sponsored by the Kuwait Petroleum Corporation (KPC).





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4. OPEC officials — Angela Agoawike (sixth right), Head, PR and Information Department, and Lisa Feix (fourth r), Administrative Coordinator; with Monique Quant (fifth r), Seminar Project Manager for IBC, the event's co-organizer; with members of her team.

5. Participants were able to get acquainted and chat informally during the Seminar's coffee breaks, which were sponsored by Qatar Petroleum.

6. Participants enjoying the buffet dinner held at Vienna's Intercontinental Hotel on the eve of the Seminar.

7. Venezuelan Minister of Popular Power of Petroleum and Mining, Rafael Ramirez (l), watches technicians as they ensure that audio visual equipment used at the Seminar is running smoothly.

8. Angola's exhibition stand at the Seminar arranged by the country's national oil company, Sonangol, which also sponsored the lunch on the second day of the Seminar.

9. Students from various regions of the world were also invited to attend the Seminar.

OPEC Seminar confirmed as leading oil industry event

Jose Maria Botelho de Vasconcelos

*Minister of Petroleum
Angola*

Asked about the significance of the OPEC Seminar, Jose Maria Botelho de Vasconcelos, Angola's Minister of Petroleum, said he thought it was very important for all involved in the petroleum sector.

Through this event we can hear views from all parties, including ministers from the producing and consuming countries. I think the OPEC Seminar is very successful.

He said that in the Panel Discussion that he chaired, the debate had gone very well. The theme of the talks had been cooperation and progress in the petroleum industry and the panelists had discussed the optimum level of crude oil prices.

'I think the conclusion was that they could be pushed a little bit towards the \$100/barrel mark,' he affirmed.

Regarding oil price volatility, the Minister said that this was because of some phenomena in the oil market that they could not control.

'We have the problems with geopolitics, the problems in the OECD countries with the financial crisis — all of this contributes to the market volatility.'

Vasconcelos said that, in this regard, it was important for OPEC at its Conference to send a signal to the market that it was working hard to maintain oil price stability around a fair price.

Asked about Angola's domestic oil developments, he said that last year the country had offered 11 blocks in a pre-salt bidding round, which represented a big challenge for Angola.

The Minister said it was important for Angola to make new discoveries to bolster its petroleum reserves.

'The national oil company is working with its partners to find more oil. We are also looking to establish a refinery so that we refine some of the crude that we are producing,' he added.



Jose Maria Botelho de Vasconcelos

Hani Abdulaziz Hussain

*Minister of Oil
Kuwait
Alternate President of the OPEC Conference*

Concerning the relationship between the international oil companies (IOCs) and the national oil companies (NOCs), Hani Abdulaziz Hussain, Kuwait's Oil Minister, and Alternate President of the OPEC Conference, said that, nowadays, one tended to want collaboration between the producing countries and the IOCs to be able to optimize one's operations.

This was especially the case with fields in the producing countries that had matured, or when one was exploring for oil and gas in fields that were difficult to produce from.

The following brief interviews were conducted by the OPEC Secretariat's Webcast team with selected officials who attended the 5th OPEC International Seminar on June 13–14 and the 161st Meeting of the OPEC Conference on June 14.

"In a way, that is for the benefit of both parties," he said.

Regarding the effectiveness of modern technology and particularly enhanced oil recovery methods, the Minister said a major part of the production was not just new discoveries, but also going into ageing oil fields where it was more difficult to produce the oil, and where the role of new technology was really very important.

"Just as in other parts of the world, we in Kuwait are finding that it is possible to produce oil and gas that was not producible before, in collaboration with firms that have the necessary technology," he explained.

Hussain pointed out that Kuwait was very short of gas supplies and "we need gas increasingly for both the petrochemical industry, but more importantly to produce power.

"We have a young and expanding population and we have an increasing need for power generation and we need gas for that."

Kuwait, he said, was currently importing gas from outside the country, but Shell was helping the country with an enhanced technical services agreement in trying to produce non-associated gas from fields in the northern part of the country. That project was progressing satisfactorily.

Concerning the current oil market situation, the Minister pointed out that instability and volatility were not good for either the producers, or the consumers.

"What is a relevant fact is that oil will remain a major contributor to the energy scene for the next 50 years, or even longer. What we would like to see is stability that does not hurt both parties – the consumers and the producers," he affirmed.

"Unfortunately, not only speculation, but also the economic situation, as well as geopolitical considerations, are increasingly giving rise to this volatility which we hope we can reduce in the future," he added.



Hani Abdulaziz Hussain

Eng Abdurahman Benyezza

*Minister of Oil and Gas
Libya*

Questioned about the impressive progress Libya had made since its domestic upheaval in bringing its oil production back on stream so quickly, Eng Abdurahman Benyezza, Libya's Minister of Oil and Gas, said all the credit in this regard had to go to the people in the field with their enthusiasm in overcoming the challenges.

"As in the past, we have faced the challenges and all our people have shown a great effort in providing the current production levels we are seeing," he affirmed.

He said that, at the moment, maintaining current oil production levels was the big challenge.

And as regards exploration, with the country settling down after last year's problems, "we have to look forward and try to explore further the 40 per cent open space in Libya."

The Minister stated that the potential was there so



Eng Abdurahman Benyezza

within maybe a year they would need to study and launch a new bidding round for exploration.

“We are having many international oil companies knocking on our door right now as they see that we are ready to go. Worldwide, I feel there is a good intention to invest in Libya. So hopefully we will not have a problem in having partners in Libya.”

Benyezza said two big areas of investment would be in infrastructure and the downstream petroleum sector. Overall, rebuilding the entire country would be an investment in itself, in addition to the oil and gas.

He said that one very important subject for Libya going forward would be petrochemicals because this would minimize the level of money they were providing to support gasoline and other petrochemicals.

“We hope new job opportunities will be created which, in turn, will have a spillover effect on the whole country. This is the aim of having the petrochemical projects up and running,” he observed.

The Minister stressed that the oil sector was particularly important because it was the only sector that was creating money for the economy.

“So our duty is to make sure that the country benefits from this income and invests it properly and encourages foreign investors to minimize the exposure of their capital investments,” he stated.

Diezani Alison-Madueke

*Minister of Petroleum Resources
Nigeria*

Asked about Nigeria’s domestic developments, Diezani Alison-Madueke, the country’s Minister of Petroleum Resources, said the technical committee looking into the government’s petroleum industry restructuring — the Petroleum Industry Bill (PIB) — was now being wrapped up.

“We have taken into consideration the most pertinent sections of the bill, particularly those that deal with the fiscal regimes as they concern the deep and ultra-deep offshore activities, but also as it concerns domestic gas,” she explained.

The Minister said that, very importantly, they had also looked at the commercialization and unbundling of the Nigerian National Petroleum Corporation (NNPC), “giving it the structure that we hope will make it into a world class, first-rate oil company, with a national oil company derivative that will function along the lines of the private sector and give us full value for our money.”

She continued: “What we are hoping for, of course, is that the national oil company that will emerge, which is now the Nigerian Petroleum Development Company (NPDC), will go from strength to strength.”

Mrs Alison-Madueke pointed out that the petroleum blocs they had already assigned to the NPDC would actually increase in terms of acreage and production.

“It has gone from about 35,000 barrels/day to around 100,000 b/d in a period of just 12 months. We expect that, over the next three years, we will top 250,000 b/d and by then the NPDC should have become the national oil company that we desire,” she affirmed.

The Minister stressed that there was no question that there were good investment opportunities in Nigeria, in terms of the medium to long term, in which the country was expecting investment in deep offshore and ultra-deep offshore. “These will be major investment interests and that is one of the reasons we are very aggressive and bullish on getting the industry bill passed through the President to the National Assembly and promulgation into law,” she observed.

Beyond that, said Mrs Alison-Madueke, the country was working very hard on the gas side of things. Nigeria had over 187 trillion cubic feet in proven gas deposits — with a potential of 600tr cu ft of reserves — “so we are expecting that with the gas master plan being promulgated into law, we will become a gas-exporting country, as opposed to just crude.



Diezani Alison-Madueke

“That, in itself, presents so many opportunities for interested investors, both upstream and the midstream, and in the gas service sector.”

The Minister maintained that the one area that Nigeria needed to grow capacity in was human resources.

“We would like to get to a stage where we have created such an enabling environment that it is a natural recourse for our engineers around the globe to return home, just as we hope that our professionals in other sectors of the economy would do the same,” she said.

But at the same time, she noted, the Nigerian Content Act, which was promulgated into law two years ago, had vastly opened the downstream sector to Nigerian indigenous companies and service providers.

“It has grown them tremendously. So across the spectrum, it has opened up vast potential for the fabrication of pipe mills, plants and some of the components that are utilized in actual production activities within Nigeria.

“We give first consideration to Nigerian marketers and service providers, without, of course, turning away our foreign partners, who we expect will join their Nigerian partners in these efforts,” she added.

Mrs Alison-Madueke said the country had actually recorded a lot of firsts in this area over the last two years. “We are very pleased with the progress we have made.”

Turning to refining, she said that, at the moment, Nigeria’s three refineries were entering a phase of main-

tenance. “We expect to get them up to 90 per cent capacity utilization by the end of 2013.

“By the end of 2012, the first refinery should be up and running to 90 per cent capacity utilization and by the end of next year, we expect the vast quantum of our petroleum products will be refined in the country to a certain extent.

“I think, all in all, we are working very aggressively to ensure that across the entire spectrum of the petroleum sector within the country we are creating value.

“Over the next three years, the adequate returns of investment will create jobs and employment opportunities, particularly in the gas sector where we are commercializing our gas resources and creating an industrialization revolution in gas.

“We are putting in place fertilizer, petrochemical, and ethanol plants, central processing facilities and LPG logistical distribution points to ensure that we actually do create the quantum of jobs — over one million — when this is all in place for the Nigerian quality,” she added.

Rafael Ramirez

*Minister of Popular Power of Petroleum and Mining
Venezuela*



Rafael Ramirez

Regarding the key challenges being discussed at the OPEC Seminar, Rafael Ramirez, Venezuela's Minister of Popular Power of Petroleum and Mining, said the gathering was a very important place for discussion and to hear the opinions of the challenges facing the international oil market.

He stated that Venezuela had introduced some key points that were permanent in their impact and, "for the first time we are supporting one of our principles whereby a country as a producer of oil has the right to administer the production of its own resources."

Continued Ramirez: "We are asking for others to respect our position. In that sense, we are asking, for example, the European Union how we are going to talk about relations between producers and consumers, when the EU is imposing sanctions against one of our Member Countries — Iran — which is a big producer of oil."

He maintained that this unilateral action by the EU was against the free market and against transparency of the market.

Also speaking on Venezuela's experience, the Minister stated that before the present government, the authorities had imposed policies in order to create certain economic conditions in the country.

"But those conditions for the international oil companies have to recognize that the Venezuelan people need enough income to have sustainability in the long term," he affirmed.

Concerning Venezuela's oil production, Ramirez said the country was adhering to OPEC's agreed output allocations with output of three million barrels/day.

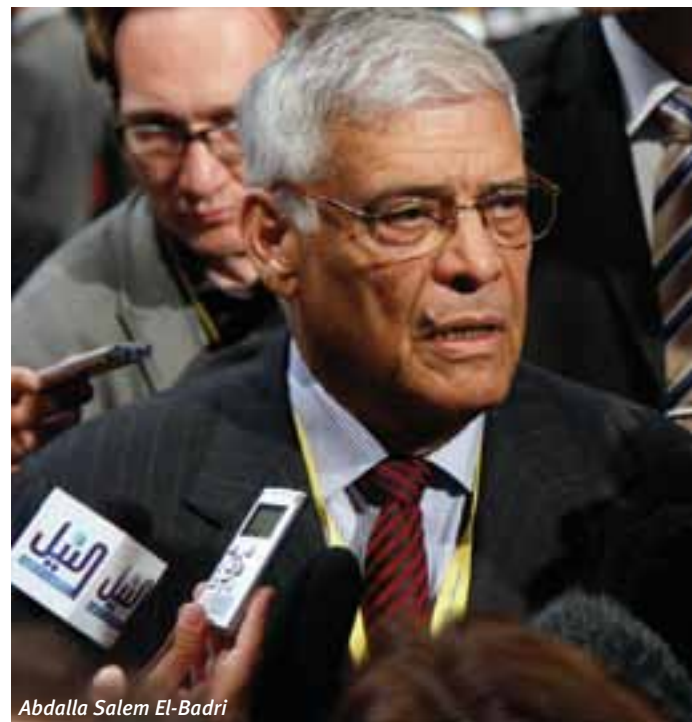
"We are now concentrating on developing our Orinoco extra-heavy oil reserves. We are looking to have a production capacity of 4m b/d by 2014 and by 2018 this amount will rise to 6m b/d," he added.

Abdalla Salem El-Badri

*Secretary General
OPEC*

Questioned about OPEC's decision to maintain total crude oil production of the Organization at 30 million barrels/day, Abdalla Salem El-Badri, OPEC Secretary General, stressed that the move was the best decision the Ministers could have made at this particular time.

"Everyone accepted that we are currently producing 1.6m b/d over and above the 30m b/d level that we agreed at our last Conference in December 2011.



Abdalla Salem El-Badri

"And those that are producing the extra oil agreed that they would cut production to the 30m b/d total," he explained.

El-Badri agreed that with all the uncertainty surrounding the oil market at the present time, it was a good decision to make by the Organization.

Asked for his impressions about the OPEC Seminar, the OPEC Secretary General replied: "The 4th OPEC International Seminar in 2009 was very successful — the latest Seminar was extremely successful. I am very proud of that fact."

Dr Hasan M Qabazard

*Director, Research Division
OPEC*

Asked how important the OPEC Seminar was for the Organization, Dr Hasan M Qabazard, Director of OPEC's Research Division, said it was a very important event.

"We spend about three years preparing for this, communicating with potential speakers and there are a lot of details to iron out. We are very happy that many ministers have answered our call, in addition to international organizations, and the chief executive officers of national oil companies (NOCs) and international oil companies (IOCs)," he said.

“All in all, we are very happy with the attendance and the speaker list. Also the themes of the different sessions are very important and timely, especially today, with what is going on with the economic situation around the world.

“We talk about the oil market, which is a very important part of the world economy and there is a lot going on there in supply and demand and how that is affecting the economies of different countries. We also have other themes, which are also timely, like the environment,” he stated.

Qabazard said that in the Seminar’s speaker list they tried to have a good composition, a balanced composition between developed and developing countries, producers, consumers, non-OPEC and OPEC officials — “so that there is a certain balance in the list of speakers that we see in each session.”

He stated: “I think this Seminar is one of the big events in the oil industry and oil market, where we have the important OPEC producers expressing their views about the market and where it is going.

“We also hear from the consumers and non-OPEC producers, the IOCs — they come here and they talk about their companies, their technologies and how they see the oil market going forward.

“We are talking about different time horizons, the short, medium and long-term, so the Seminar is a very important and timely event for the oil industry and we are enjoying it very much,” he added.

Concerning the oil market, Qabazard pointed out that oil prices touched everybody, the man in the street, the CEO, ministers – so it was a timely issue and there was a lot of debate.

“Not everyone agrees on the same concept, if it (the oil price) affects economies, or if it does not affect economies.

“All in all, I think the discussions are timely and very important, especially at this time in the oil market and the world economy, where economies are trying to get out of recession. This also includes poverty and we have talked about poverty eradication and energy for the poor.

“There is a wide variety of subjects of importance to the world at large,” he maintained.

Abdul-Hussain Bin Ali Mirza

***Minister of Energy
Bahrain***

Questioned about how important it was for OPEC and non-OPEC producers to work together, Abdul-Hussain Bin Ali Mirza, Bahrain’s Minister of Energy, said it was very important because there were many non-OPEC producers that also had large production, for example, Egypt, Oman and Mexico.

“These are large producers and they have chosen not to seek OPEC membership. Bahrain is not a large producer, but we have a long history of oil because the first oil discovery was in Bahrain 80 years ago.

“We like to feel in Bahrain that we have a great role to play in the oil industry, from that small beginning in 1932 the whole region was discovered, in respect of its oil and gas reserves.

“So, for us, what decisions OPEC makes have a great impact on our activities. But, at the same time, we are members in other areas, for example we are part of the Organization of Arab Petroleum Exporting Countries (OAPEC) along with ten Arab countries, six of which are in OPEC.

“We are also a member of the Gulf Cooperation Council (GCC) and we are a member of the International Energy Forum (IEF), so that we can unite our stand and our decisions with the other OPEC Members to make sure that



Dr Hasan M Qabazard



Abdul-Hussain Bin Ali Mirza

our interests as a small producer are also protected,” he stated.

Concerning Bahrain’s oil production, he said the 80-year-old Bahraini field where production first started had seen declining output, so the country had asked international oil companies (IOCs) to partner with Bahrain in using enhanced oil recovery technology to boost its performance.

“We have since stopped the decline and production has actually started going up. It has increased by 50 per cent in one-and-a-half years, which is tremendous,” Mirza revealed.

“We also have a shared offshore field with Saudi Arabia which produces 300,000 b/d and we get 50 per cent of that, which is 150,000 b/d.

“However, what we pride ourselves in is that the political leadership has developed the Bahraini Human Resources programme, which is now seen as the main capital of the country.

“You see Bahrainis at every conference, they contribute in many things and in this way we feel the real wealth of Bahrain. This is what we can contribute — the skilled manpower, the skilled knowledge — to other parts of the world,” he maintained.

“For us in Bahrain, the skilled manpower is unique. Bahrain was not only the first country to discover oil, but it was also the first country to diversify from oil.

“Today, we have one of the most important financial centres in the world. The Bahrain Financial Centre is well known everywhere and this is made up of hundreds of banks. All of these banks are attracting young employees and they pay much higher than we do in the oil industry.

“So we have lost lots of people. But what we are trying to do now is to attract these people back by using new technology and telling them that the oil industry will stay much longer than they thought,” he observed.

Mirza pointed out that technology definitely played a key role in all the new oil and gas developments, in energy conservation, in renewable energy and in enhanced oil recovery with old fields.

“We were, in fact, the first to use enhanced oil recovery, but now even the countries with lots of oil are using this technique and that can only happen through the application of new technology.

“We are fortunate in Bahrain that the environment the political leadership has created allows IOCs to come and operate in the country and transfer technology to Bahrainis. So we are now using modern technology on a wider scale in Bahrain and it is helping us in every aspect of our lives,” he concluded.

Jaipal Sudini Reddy *Minister of Petroleum* *India*



Jaipal Sudini Reddy

Asked about the effect high oil prices had on a developing country such as India, Jaipal Sudini Reddy, India's Minister of Petroleum, pointed out that high prices not only did not work for the country, they were actually hurting the economic growth rate.

"Today, in my Seminar presentation, I cited facts and figures to show how this is perhaps the most important reason why growth rates have come down suddenly in India," he said.

The Minister said that the second problem was that while India was buying crude oil at the higher rate, "we are unable to pass that on to the consumers who are very poor."

He pointed out that as a consequence of being an economic problem, it was becoming a political problem too.

"We do not mind that the producers gain from higher prices, but the present rise in prices is benefitting financial intermediaries. There is a need to put some reasonable curbs on speculation in activity in the oil markets," he professed.

Reddy asserted that in the producing countries and the major consuming nations, like India and China, "we should all be able to get together and exert enough pressure on the international system. We are not getting our act together."

He said that, in fact in India, they were not worried about a declining growth rate because the population of the middle classes continued to grow.

"Their hunger for consumption goods is insatiable. It is not a demand problem, it is a supply problem," he observed.

The Minister posed the question that if the supply of oil was that much more costly, who could bear it?

"Governments cannot bear it beyond a certain point. If you are importing oil worth \$90 billion and passing on a subsidy of \$30bn to the consumers, how do we run the economy in the short run?"

Reddy said he was not talking about the long term, "where a huge country can absorb the shocks. I am talking about in the meantime, in three to five years — then it becomes very painful and impossible to handle."

Aldo Flores-Quiroga

**Secretary General
International Energy Forum (IEF)**

Questioned about the role of the Forum and the importance of producer/consumer dialogue, Aldo Flores-Quiroga, Secretary General of the IEF, said that so many issues raised by the OPEC Seminar that were relevant to sustainability, poverty, oil market stability, were all



Aldo Flores-Quiroga

important topics that figured in the range of conversation held at the IEF.

"And I see that we have to do much more in respect to the type of information that has to be generated to get a very fruitful dialogue," he maintained.

He said that in the two days of the OPEC Seminar, "we heard a lot about what the international oil companies (IOCs) and the national oil companies (NOCs) can do together.

"We at the IEF have an IOC-NOC forum which we see more as a dialogue, as a place for the exchange of information and ideas, as to maybe find those partnerships that can help address some of the challenges that have been outlined here, even those that are linked with energy poverty.

"We need energy companies to develop oil resources, but also to be much more committed to the communities in which they work," he professed.

Flores-Quiroga revealed that, at the IEF, they already had an energy poverty symposium and hoped to be holding a meeting next year.

"Also, in the IOC-NOC forum, we are also looking at this situation. The IOC-NOC forum, to be held in February next year in India, will hopefully make advances in this area because definitely energy poverty is one of the main items on the agenda and high on the list of interests to ministers who participate in the IEF."

Concerning the Joint Organizations Data Initiative (JODI), the IEF head said he thought it was growing stronger every day.

“More people are using it and we are getting very good reviews about what it means and its usefulness overall for the energy market. We still have work to do, and, as I have been saying, we are bringing together information from so many sources and with so many methodologies.

“But we are going to get there and we will be doing the same with natural gas markets,” he added.

Günther Oettinger

*Commissioner for Energy
European Union*

Looking at the current oil market situation, Günther Oettinger, the EU’s Commissioner for Energy, said the industry needed to have the best cooperation and collaboration among its market players.

He maintained that both the producers and the consumers needed mid-term and long-term planning security and clarity.

“This is from the supply side — the producers of the oil — and from the demand side — the consumers and customers.”

Oettinger maintained that getting a good estimation of the long-term outlook for the EU oil market was key to assessing all the investments required, from the production side to pipelines and storage capacity.

“For the future, we need a smart energy mix and a smart credit sheet with more and more renewables and additional gas,” he said.

“We will also need oil for some decades, mainly for transport, for planes, for ships, for trucks, for busses and we need more efficiency. We are so dependent on imports and we need to be more efficient.”

Oettinger said that being more energy efficient was key to the EU’s strategy — not to so much depend on imported oil and to have investment for lower prices in the next decades.

Asked about the EU-OPEC Energy Dialogue, he said the EU was very happy with the dialogue, which is held every year, either in Vienna or Brussels.

“We are looking at a clear and common outlook as to what will happen in the markets in the next years and I am happy that OPEC Member Countries are quite flexible in their ability to produce oil volumes and so we have a really functioning and fair relationship,” he added.



Günther Oettinger

Peter Voser

*Chief Executive Officer
Royal Dutch Shell*

Regarding the role of carbon capture and storage (CCS) in the oil industry, Peter Voser, Chief Executive Officer of Royal Dutch Shell, said he thought it was a key mitigation technology for the longer term to help combat climate change.

It was part of Shell’s four-key alternative energy drive. “We are very close to taking a final investment decision on the first very big demonstration project in Canada, linked to the company’s oil sands project.”

Voser pointed out that the one stumbling block in the CCS initiative was that there was no agreement between the developing and developed countries.

“We at Shell have taken a decision that we must move on. We will do some of these demonstration projects because we believe in the longer-term success of CCS and we use it in all our projects with a carbon price of \$40/tonne, just to reflect the potential future,” he disclosed.

Asked about the relationship between the international oil companies (IOCs) and the national oil companies (NOCs), Voser said he no longer made a distinction between IOCs and NOCs.

“We are either all IOCs or we are all energy companies at the end of the day. We work globally and I think if we join forces we can actually deliver a better energy system in the long term for the world and I think that should be our objective,” he maintained.

Regarding crude oil prices, Voser said the current volatility was a short-term issue and would not impact Shell’s strategy.

The company’s projects were over a 20–30 year time horizon and “that is what we are looking at. The short-term volatility is something we manage in the short term with regards to cash flow, but not for investment decisions in our strategy,” he added.



Peter Voser

Wang Dongjin

Vice President

China National Petroleum Corporation (CNPC)

Concerning the domestic economy and oil demand growth in China, Wang Dongjin, Vice President of the China National Petroleum Corporation (CNPC), said that



Wang Dongjin

Chinese economic development had actually been very successful over the past 30 years.

Average GDP had been around eight per cent each year, but in fiscal 2012, due to the global financial crisis and the European debt problems, Chinese economic development was a little lower than before, he explained.

“But generally speaking, it is still a good growth level – around eight per cent this year – and if the global economic situation improves, maybe we will see a higher GDP figure in China in the future,” he affirmed.

Wang maintained that Chinese energy growth was facing two challenges.

“The first is the ever-increasing domestic energy consumption,” he stated.

China, he informed, had a population of over 1.3 billion and, with its GDP expanding by about eight per cent a year, it meant that by 2030, domestic oil consumption would reach 700 million tonnes/year, of which 200–250m would come from domestic production.

“So another 450–500m t will have to be imported. That is a big challenge,” he stated.

The second challenge, continued Wang, was the energy consumption structure of the country.

“Right now, energy consumption is very heavy on coal. Coal consumption stands at 69 per cent of our total energy consumption and natural gas accounts for 22 per cent, while alternatives occupy nine per cent.

“So we have to think how we can increase natural gas consumption. This is our policy. We are trying to do our best to overcome these two challenges,” he added.

Christophe de Margerie

*Chief Executive Officer
Total*

Asked to comment on the current level of crude oil prices, Christophe de Margerie, Chief Executive Officer of Total, said they had seen in recent weeks the price of crude declining sharply from \$125/b to below \$100/b.

“Is this a signal that we might go lower?” he asked. “Yes, we might go lower. But if we do go lower, the question will be then, how much can we afford to invest, if the prices are too low?”



Christophe de Margerie

This kind of development, he said, would have an impact on the future — it would mean less investment.

“I think what is important for the consumer is a stable price — not too high, but stable. If we go lower, prices at the pump will be less, which is good news and which might be important for the economic recovery.

“But then we are likely to have higher prices in the future because we have people with no access to energy, who want access to energy, which, in turn, will create the demand. We will then have to be concerned about availability, the geopolitics, security and acceptability.

“So, all of these things need to be taken into consideration. Today, the price of oil, in my opinion, will not go very much lower and it could go higher. But let us try and make it stable,” he stated.

De Margerie maintained that they needed to send a signal that stability was important, as was the recovery of the economy.

“But this should not be at the expense of not permitting additional resources to be developed to cover the needs especially of the emerging countries and the poor people,” he stressed.

Speaking about Total’s activities, de Margerie disclosed that the firm’s budget for this year was \$24 billion.

“This is a huge amount of money and it is good news for Total, it is good news for our shareholders and it is good news for the consumers.

“It means we are preparing for their future, we are preparing for what is needed to cover demand.

“We at Total and at other companies must face our responsibilities to invest in cleaner, acceptable, efficient resources that respect the environment. It is not easy, but it is our role and we will do it,” he asserted.

Lars H Thunell

*Executive Vice President and Chief Executive Officer
International Finance Corporation (IFC)*

Questioned about the higher level of crude oil prices seen recently, Lars H Thunell, Executive Vice President and Chief Executive Officer of the International Finance Corporation (IFC), said it was always the poor people that were being hurt by high oil prices, or the high price of food that was correlated to the oil price.

“But, having said that, high oil prices are also creating opportunities for investment. We have seen a lot of oil exploration in Africa, for example, where many new finds have been discovered.

“The question, of course, going forward, is how do we make sure that these (oil discoveries) benefit the people in the countries concerned, that there is a fair distribution of the revenues coming out and that companies get a chance to sell their products to the projects and in



Lars H Thunell

general that they feel that it is something good for them and not as some people say a curse.”

Thunell maintained that this was one of the challenges going forward and that was where “we at the World Bank see ourselves working very hard.”

He said that there was a lot of best practice, especially on how to manage the revenues, in having the extractive transparency initiative, which was launched by the World Bank, and talk about total transparency.

Thunell said that when it came to the income and revenues from these industries, how did one actually create the linkages with the small and medium-sized enterprises?

“It is also about how you manage sovereign wealth funds as you start these projects, as most countries have some type of stability fund,” he observed.

Then, he added, it was a case of having the best practice and thinking long term, that it was not only a quick bonanza, “but something with which you are building a country effectively.”

Concerning the IFC’s work with the OPEC Fund for International Development (OFID), Thunell noted that if

the Corporation could often work together and be partners with institutions like OFID, “they have their relationships and their knowledge and we have our global knowledge — we can combine these and get much stronger together.”

Michael Suess

*Chief Executive Officer
Siemens*

Regarding the global growth forecast for energy demand, Michael Suess, Chief Executive Officer of Siemens, pointed out his company in its operations was not looking at the world over the next few quarters or half a year.

“We must look at the next five, ten or 15 years and there is one message that is clear — whatever we do in energy efficiency will save resources for future generations.

“And that is the essence. There are huge opportunities out there and we have seen, especially in the



Michael Suess

oil-producing world, that there are still technologies being used that have just 25 per cent efficiency,” he observed.

"We can easily double that efficiency," he maintained.

Suess said that if one worked on a project for over three years, the costs were so high and nobody could bypass that fact.

"But we have to look at it from an economic point of view because, in the end, it is all about money. We should not waste money and my company can provide the technical solution proven all over the world," he affirmed.

Suess pointed out that Siemens worked in 190 countries, "so we can really take the best out of everything to fit in with the right portfolio and the right demands of our customers."

Michael Lynch

President

Strategic Energy and Economic Research Incorporated (SEER)

Asked to comment about the human resources side of the energy sector, Michael Lynch, President of Strategic Energy and Economic Research Incorporated (SEER), said human resources were a very important aspect of the petroleum industry.

"As in any industry, it is absolutely crucial to focus on your people first and then move on to the technology and the other aspects of the operations," he maintained.

Lynch noted that part of the problem with their potential shortage of human resources in the energy sector was that the industry had a boom and bust cycle and there were people who would advise you not to enter such an industry because you ran the risk of "being fired three times in 20 years."

He continued: "Right now, we are in a boom and the shortage of people is quite tight. But when you talk about highly skilled people, yes, it is a big problem to worry about."

Lynch said the fear was perhaps that if oil prices came down and you got cutbacks, people would move into other industries and it would be harder to bring them back.

"The other problem is you push salaries up and up and that raises your overall costs," he explained.

Asked about the state of the current oil market, Lynch said he considered that the fundamentals were more important in the long term.

"In the short term, because of the recession and the economic weakness, combined with a strong oil supply, I think we are going to have to see some reductions in supply to keep inventories from building to such a high level that prices come down.

"In that case, I think we will see relatively stable prices for the next few months," he asserted.



Michael Lynch

Lynch said the bigger question, partly, was that, long term, they were going to see robust supply from places other than the big producers such as the United States, countries like Colombia and Oman – the smaller producers that had been performing pretty well lately.

“Can that continue? There is also the question about Iraqi production, they have a target,” he added.

Prof Øystein Noreng

BI Norwegian Business

OPEC Research Award winner

Questioned about the changes taking place in the global energy sector, Prof Øystein Noreng of BI Norwegian Business and the winner of the 2012 OPEC Award for Research, said that shale oil and shale gas were today’s industry game-changers in many ways.

It also meant the world was getting more resources and one could forget about the peak oil theory.

“Together with conventional oil, there are many resources out there. In addition the high prices we have seen have contributed to these developments and it means that we will have volume growth,” he maintained.

“In my view, we will see a lot of volume coming onstream, both conventional and non-conventional oil, and we could also see that the consumers will become more economical in the use of their oil and you will have a certain transition away from oil,” he forecast.

“Therefore, we could have a weak market in the next few years,” he added.

Noreng said the other thing he had witnessed in the sector was the restructuring of oil trade. North America was becoming self-sufficient. By contrast, China was growing quickly and much of the international oil trade would be fuelling China’s imports, firstly from the Middle East, but also from Africa and also from Brazil.

“I see some very important repercussions from this. China may conduct more and more of its trade in its own



currency and that would marginalize the use of the US dollar,” he observed.

Looking at the general situation, Noreng said there was no longer the big divide between the developed and the developing world, because the developing world was becoming quite developed.

“Some of the countries you cannot call developing anymore,” he asserted.

He said looking at the oil sector, for example, when he started working in the oil business in the late 1960s, the industry was Anglo-Saxon with the ‘seven sisters’, five of which were American.

“Today, Petrochina is the world’s largest oil company and the oil industry is far, far less western. This is normal in the world we live in today,” he added.

What they thought of the OPEC Seminar ...

The 5th OPEC International Seminar meant different things to different people, even though its central message was clear. Below is a selection of comments from the Seminar's guest speakers, made in their respective presentations.

Wilson Pastor-Morris, Minister of Non-Renewable Natural Resources, Ecuador

"I am very pleased to be part of such an important event as the 5th OPEC International Seminar."

Rostam Ghasemi, Minister of Petroleum, Iran

"The Seminar, which creates the opportunity whereby the opinions and the viewpoints of participants can be listened to, prepares the ground for an exchange of views on major economic and energy topics. It will enhance our awareness on energy-related energies and it will pave the way for a clearer understanding of future global energy trends, stability and sustainable development."

Abdul-Kareem Luaibi Bahedh, President of the OPEC Conference, Minister of Oil, Iraq

Speaking on his behalf — Dr Falah J Alamri, Iraqi Governor for OPEC

"I would like to reiterate my deep appreciation to all the relevant authorities for the excellent organization of this Seminar."

Abdurahman Benyezza, Minister of Oil & Gas, Libya

"It gives me great pleasure to be part of this gathering here today and to address such an eminent audience."

Diezani Alison-Madueke, Minister of Petroleum Resources, Nigeria

"Given this current state of the global economy, I don't think there could have been a better time to hold this Seminar."

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

"It is a great honour and pleasure to be here with you at the 5th OPEC International Seminar. I hope this prestigious event will augment and steer a fruitful exchange of views among its industry leaders and political decision-makers."

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

"The OPEC Seminar continues improving and is becoming one of the major international events of today's energy market."

Rafael Ramirez, Minister of Popular Power of Petroleum & Mining, Venezuela

“It is a great honour for me to be able to represent my country in this important event which brings together the most qualified spokespersons of the various actors involved in the international petroleum sector.”

Abdalla Salem El-Badri, Secretary General, OPEC

“On behalf of the OPEC Secretariat, I would like to welcome you to the 5th OPEC International Seminar. It gives me great pleasure to see lots of familiar faces, as well as so many new ones. I hope you all enjoy the event.”

Günther Oettinger, Commissioner for Energy, European Union (EU)

“The Seminar brings together such a significant group of government and private sector representatives, on topics that are central to the future of energy.”

Michael Suess, Member of the Managing Board, Siemens AG

“It is really a pleasure for me to represent my company in this distinguished environment.”

Wang Dongjin, Vice President, China National Petroleum Corporation (CNPC)

“I would like to thank the organizer of this event, OPEC, for inviting the China National Petroleum Corporation. I am honoured to attend the Seminar as a representative of a oil company from a consuming country.”

Lars H Thunell, Executive Vice President and CEO, International Finance Corporation (IFC)

“It is a great honour for me to be here at your meeting, representing the International Finance Corporation and the World Bank.”

Gerhard Roiss, CEO OMV AG

“A special welcome to you here in Vienna — my hometown. It is a special honour for me to have you here.”

Brad Page, CEO, Global Carbon Capture & Storage Institute (GCCSI)

“It is indeed a pleasure and an honour to participate in this Seminar today.”

Urban Rusnák, Secretary General, Energy Charter Secretariat

“I am indeed pleased and very honoured to have the opportunity to address you here today at this 5th OPEC International Seminar.”

Alan Crain, Senior Vice President, Baker Hughes

“It is a great honour for Baker Hughes to participate in the 5th OPEC International Seminar and it is a unique personal pleasure for me to be here to speak to you today.”



EU-OPEC Dialogue scores success in enhancing understanding of global energy markets



The flags flying outside the EU headquarters in Brussels, which hosted the 9th Ministerial Meeting of the EU-OPEC Energy Dialogue.

by Jerry Haylins

When the suggestion to establish an energy dialogue between the European Union (EU) and OPEC was made back in 2004, some- skeptics gave it little chance of any real success.

Individually, countries from both groupings had been engaged in successful business dealings and trade relations for many years, but no formal dialogue had ever

existed between the two intergovernmental bodies, and certainly not at such a high ministerial level.

So, understandably, feelings back then for something 'official' to be set up within the respective mandates of the EU and OPEC Secretariats were, to say the least, tentative.

In fact, with the divide between the oil-producing and consuming organizations appearing too great to bridge



To say that impressive progress has been made over the past seven years (the first EU-OPEC Meeting was held in Brussels in June 2005) would really be an understatement.

In truth, the Dialogue has turned out to be a fine example of how two diverse groups with seemingly opposing interests can come together and form an alliance for the greater good of all.

Producers and consumers of such a valuable and vital resource as petroleum will always have their own vested interests, yet in the case of the EU and OPEC, they have come to realize in this growing interdependent world that confrontation helps no one — cooperation and coordination are the way forward.

And it is working, as the ongoing discussions and activities nurtured by these two important world groupings is proving year after year.

The latest parley — the 9th Ministerial Meeting — was held in Brussels, in June, at the impressive headquarters of the EU. Each year, the two sides take it in turns to host the

Left: Abdalla Salem El-Badri (l), OPEC Secretary General, with Günther Oettinger (r), the EU's Energy Commissioner.

following years of a sterile existence, one questioned just what there would be to talk about in such a venture.

That was then — this is now. And, as happens so frequently in the pioneering of global developments, the detractors have been proved wrong.

Next year will already signal the 10th Ministerial Meeting of the official EU-OPEC Energy Dialogue, an initiative that is ever-evolving and which gains strength and impetus with each passing year.

annual talks. The 10th Anniversary Meeting will therefore be held in Vienna next summer. And both sides have plenty to smile about.

The Energy Dialogue today is actively furthering constructive and effective cooperation on energy between the two groups of countries and is making a difference in serving to enhance oil and energy market stability, bringing benefits to the world as a whole.

Through open and frank exchanges and collaboration at both ministerial and technical levels, the two sides have learned — and are continually learning — about each other's aims, objectives and aspirations.

The development of mutual ties has allowed both the EU and OPEC to better understand the current and future energy challenges, from both producer and consumer vantage points.

Through their interaction and joint activities, they are identifying areas of common ground, discussing respective viewpoints on the most topical of issues, developing areas of interest and expanding bilateral contacts across various levels within the two organizations.

This has been achieved through a variety of means, including annual ministerial meetings, reports and stud-

inception, over 50 years ago, the Organization has been prominent in making repeated calls for dialogue and cooperation between the oil-producing and consuming countries.

Its Member Countries have always seen this approach as representing the best means of securing oil market stability, supply and demand equilibrium and fair and reasonable prices.

They are also of the opinion that for any dialogue to be effective, it must be structured, regular and held at the highest policy-making level.

Thus, OPEC must have been delighted to read part of the communique from that very first meeting with the EU, which stated that “this important new initiative is seen by the EU as a part of a broader approach

The OPEC team — Abdalla Salem El-Badri (third left), OPEC Secretary General; with (l-r) Nabeela Abdulla Al-Mulla, Kuwait's Ambassador to Belgium; Hani Abdulaziz Hussain, Kuwait's Oil Minister and Alternate President of the OPEC Conference; Dr Hasan M Qabazard, OPEC's Research Division Director; Oswaldo Tapia, Head of the Organization's Energy Studies Department; and Garry Brennand, Senior Research Analyst in the Energy Studies Department.



ies, and roundtables and workshops on various important issues.

Over the years, this interaction has included discussions and work in such important areas as the effects of the global financial crisis on the oil sector, the impact of financial markets on oil price volatility, energy policies, biofuels and their impact on the refining sector, and energy technologies, including the innovative carbon capture and storage (CCS) process.

The move to set up the Energy Dialogue was actually made by the EU. The proposal for the dialogue was aired at the International Energy Forum (IEF) Meeting in Amsterdam in May 2004, but the first EU-OPEC Meeting was held in June the following year.

It was a move warmly welcomed by OPEC. Since its

to strengthen energy dialogues with the main oil and gas suppliers.”

The statement also pointed out that the Dialogue was seen as a “natural extension of the warm relations that have existed for decades in many areas of activity involving members of the two Organizations.”

After all, it added, trade between the two groups occurred in many sectors, with the countries involved benefiting from the flow of goods and services.

OPEC, of course, has always been aware of the fact that the EU energy market is the most integrated in the world and increasingly dependent on imported energy. It also represents a significant share of the Organization's petroleum exports, thus making the need for regular dialogue even more essential.



From the EU side — Günther Oettinger (centre), EU Energy Commissioner; with (l-r) Marcus Lippold, Policy Officer in the External Relations Unit of the EC's Directorate General for Economic and Financial Affairs; Paula Abreu Marquees, Head of Unit, at the Directorate General for Economic and Financial Affairs; Martin Lidegaard, President of the EU Energy Council and Denmark's Minister for Climate and Energy; and Neoklis Sylikiotis, Incoming President of the EU Energy Council and Minister for Commerce, Industry and Tourism of Cyprus.

So, OPEC always saw the move towards setting up the Energy Dialogue as a natural extension of the existing relations between members of the two sides.

The EU, which has expanded considerably over the years and has vital links to other regional blocks, is OPEC's main trading partner and, importantly, it is strongly felt that interdependence has to go hand-in-hand with this.

Energy relationships

Trade between the two organizations exists on many levels. Although OPEC is primarily seen as a supplier of petroleum, its Member Countries — many of which are expanding at a fast rate — also possess vertically integrated industries in oil and gas and require many of the goods and services produced within the EU.

Longstanding bilateral energy relationships have prospered for decades, but, in recent years, ties have moved more and more towards non-oil activities and services, as OPEC Members strive to diversify their economies.

Trade is, therefore, a two-way process and members of both the EU and OPEC derive enormous benefit from the growing level of imports and exports.

That is why effective dialogue has — and continues to be — an important feature of relations between the EU and OPEC.

The regular contacts, discussions and joint initiatives held under the umbrella of the Energy Dialogue have established a clear framework for jointly tackling future

oil industry challenges in a coordinated manner, something that can only spell good news for the future of all associated with the energy industry, especially in today's testing economic climate and associated uncertainty.

Today, the EU is having to deal with a series of financial and sovereign debt problems associated with the Eurozone that has resulted in the worst economic downturn in decades. This, in turn, has affected oil demand which continues to decline. It all makes the Energy Dialogue ever more necessary.

Looking to the longer term, and hopefully the end of the economic quagmire in Europe, both the EU and OPEC realise that it is essential to lay the groundwork now for ensuring an orderly supply of oil well into the 21st century, when demand is forecast to continue rising, while issues such as sustainable development and the environment are gaining more prominence by the day.

In Brussels, the EU-OPEC ministerial talks were unanimous in their support for the initiative.

In welcoming the OPEC team, **Günther Oettinger, the EU's Energy Commissioner**, praised the Dialogue for its significant contribution to improving their joint understanding of the global oil markets.

Through cooperation and the engagement of several topics influencing the oil markets, they had effectively strengthened their sense of security of supply and demand.

"Our cooperation has matured and we are starting to take an interest not just in traditional consumer-producer issues. It has allowed us to start focusing also on the

need for a broader energy base on technological developments in the field of energy, which have an impact on energy demand and supply,” he asserted.

Oettinger pointed out that the ongoing EU-OPEC cooperation had already yielded concrete results in many specific areas and topics of mutual interest.

“I am fully confident that this Dialogue can provide further impetus to mastering the energy challenges ahead of us. It is an initiative that will continue to develop in the spirit of mutual trust and collaboration,” he stated.

In looking at the current oil market situation, the EU Energy Commissioner said they were again meeting in challenging times.

At last year’s EU-OPEC Meeting in Vienna, he said, they were faced with the problems of the Middle East and North Africa (MENA) region and the challenges they posed to some OPEC Member Countries.

“I am fully confident that this Dialogue
can provide further impetus to
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mutual trust and collaboration.”

— *Günther Oettinger*

“Over the last year, we have been again faced by several new challenges, not least the problems in the Euro-zone countries and weak economic performances in various regions of the world,” he affirmed.

Oettinger said that he was, however, pleased to say that despite the difficult times, the stable relations achieved by the Energy Dialogue had allowed both the EU and OPEC to stay focused on fostering market stability, in the interests of producers and consumers alike and to ensure sufficient energy supplies.

Concerning the oil market, he said that over the past two months they had seen the price of oil coming down from its recent highs, maintaining more acceptable levels.

That was due in part, he said, to robust OPEC

production, “for which I would like to commend the Organization.”

The recent challenges in the Euro-zone and mounting concern over a slowdown in Chinese economic growth, as well as rising global oil supplies, had also played a part in the price decline, he explained.

Downside risks

Looking ahead to the rest of the year, Oettinger pointed out that there were downside demand risks, but also upstream potential. He considered that the markets would remain volatile.

“So, we need to stay vigilant,” he stressed, adding that OPEC’s decision at its June Conference in Vienna to maintain its current production levels was “a well-advised measure at a time when it is not clear how global economic developments will evolve in the mid-term.”

Oettinger said that in this regard the EU-OPEC Dialogue needed to factor into its joint analysis the latest trends and developments in the international oil market, such as the major shale oil and gas developments in North America and Canada, the exploration and production activity in Iraq and Libya and their effects on oil demand.

He professed that in the difficult times they were experiencing they should resist the temptation of making easy decisions that could prove dangerous in the mid and longer term.

“For instance we should not fall into the trap of reducing capital expenditure investments in needed infrastructure and research. This would mean supply bottlenecks in the future when economic activity picks up again,” he observed.

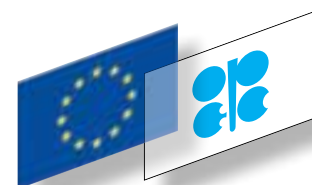
He noted that although the price of oil had come down from its recent highs, it was still significantly high, given the economic uncertainties they were facing, which made economic recovery difficult in many countries.

“We also need to keep up our efforts to further increase transparency in the oil and gas markets, via the Joint Organizations Data Initiative (JODI), or other means, in order to curb speculation,” he contended.

Broader energy base

Oettinger highlighted the need for creating a broader energy base and acknowledged the vital role that technology and research could play in this regard.

He noted that the EU had embarked on such a challenge — the Energy Road Map 2050 — which was



published last year. It contained an energy efficiency directive and included other pieces of legislation that were currently being discussed.

“Staying closely engaged with our partners in the energy field will be key for the success of our policy developments and their effectiveness. Cooperation on these challenges will see a quicker success rate in developing and employing needed technologies,” he maintained.

In order to do so, said the EU Commissioner, pragmatic cooperation between universities or think-tanks could be of benefit.

“I am very keen to include OPEC Members as major stakeholders in these deliberations and I invite you to join us in our efforts to assess the likely energy paths the EU energy sector could follow. We need your expertise, your analysis on EU markets up to 2030 and 2035 — the next two or three decades, he told the OPEC team.

“This requires the consideration of not only the technical parameters of the EU’s future energy demand and the future energy supplies from countries like OPEC’s. It also requires serious discussions about our use of future policy decisions in your, as well as our, member states,” stated Oettinger.

“We should try to jointly assess the impact of major events and policy changes on medium and long-term oil demand.

“So, I would like to encourage you to use the meeting today to see what is jointly needed to ensure that the markets are adequately supplied in the immediate future and mid-term and what is achievable by producers and consumers to grow the energy base for the benefit of all parties and identify the best projects to cooperate on.”

Oettinger said he saw the EU-OPEC Meeting as furthering the enhancement of their mutual understanding of producer-consumer needs and priorities and possible actions that could be taken by either side to ensure sound market fundamentals and secondly to agree on the initiative’s future joint action programme.

“I am looking forward to a frank exchange of views on what can be done. I am confident that our close interaction at a political level today will bear fruit in the near future,” he concluded.

Responding for OPEC, **Hani Abdulaziz Hussain, Alternative President of the OPEC Conference and Kuwait’s Oil Minister**, stressed that the holding of the annual EU-OPEC ministerial meetings was a constant reminder of the importance of the Energy Dialogue in enhancing their understanding of each other’s concerns, challenges and priorities.

In the past seven years since its establishment, he noted, many important issues had been discussed at the meetings, including the effect of energy policies on investments, the future of biofuels, CCS, and the impact of the financial sector on oil prices.

Deeper insights

“Through this forum, we have been able to learn from each other and benefit from each other’s expertise. We have also been able to establish joint studies, workshops and roundtables to focus on specific topical areas and gain deeper insights,” he affirmed.

Hussain, who was making the opening address in the absence of OPEC Conference President, Abdul-Kareem Luaibi Bahedh, Iraq’s Minister of Oil, who was unable to attend, pointed out that under the umbrella of the Dialogue, the EU and OPEC had benefited in other areas.

“We have improved our channels of communication and we have all made valuable new contacts within the global oil industry. Each of these is a real achievement that can help us now and in the future to achieve

“Through this forum, we have been able to learn from each other and benefit from each other’s expertise. We have also been able to establish joint studies, workshops and roundtables to focus on specific topical areas and gain deeper insights.”

— *Hani Abdulaziz Hussain*

energy stability and security, to which we all aspire,” he maintained.

Turning to the oil industry situation, the Kuwaiti Minister said there were many challenges, particularly with regard to the mixed signals they were receiving about the state of the global economy.

He observed that uncertainty about the global economy lay behind much of the present oil price volatility.

“Of course, the debt crisis being faced by the



Above:
Hani Abdulaziz Hussain,
Alternative President of the
OPEC Conference and Kuwait's
Oil Minister,

Euro-zone concerns us in OPEC. This is partly because of the uncertainty that it is creating across the global economy and the impact that it can have on the oil market. We hope, therefore, that there will be a solution soon to the Euro-zone crisis.”

As for crude oil prices, Hussain stressed that the recent high volatility had again been exaggerated by excessive speculation in the global financial markets.

“This is an issue which participants in the EU-OPEC Energy Dialogue have already studied at length. But it is still a problem. And so we look forward to the strengthening of financial regulation and increasing oversight of the paper markets by the end of this year,” he observed.

Regarding OPEC, Hussain stressed that the Organization had, as always, been ensuring adequate oil supplies to the markets and not more so than since the beginning of 2011, when many geopolitical factors posed a threat to supplies.

This action, he said, had ensured that prices did not escalate to levels that would put a further strain on the global economy and the financial system.

At the 161st Meeting of the Conference in Vienna, he added, the Ministers’ decision to adhere to their production ceiling of 30 million barrels/day was in recognition of the importance of ensuring oil market stability and achieving a comfortable supply and demand balance.

“In taking this decision, OPEC Member Countries reaffirmed their readiness to respond swiftly to developments

that might place oil market stability in jeopardy,” he pointed out.

Hussain explained that OPEC also recognized the importance of maintaining oil prices at levels that would encourage investment in additional capacity, thereby ensuring long-term energy market stability.

OPEC remained true to its longstanding commitment to market stability, in the interest of all parties, as expressed in its Statute and later reaffirmed in its Summit Declarations.

Hussain maintained that any discussion on energy today had to address sustainable development and the environment, issues that were of special significance.

“Our Energy Dialogue is a reflection of this comprehensive commitment to these key, interlinked, multilateral objectives. Thus, we welcome the chance to discuss leading energy issues of the day and the emerging trends with our distinguished friends from the EU and we look forward to developing the Dialogue even further at today’s meeting,” he concluded.

The need for cooperation was also stressed by [Martin Lidegaard, President of the EU Energy Council and Denmark’s Minister for Climate and Energy](#).

“Only through cooperation can we deliver on our energy challenges of today and tomorrow,” he told the meeting.

He said a safe, secure, affordable and sustainable energy supply was a necessary precondition for achieving sustainable economic growth and social welfare for all nations’ citizens.

“Energy security is not only a concern, it is also an opportunity to increase stability and cooperation among nations,” he maintained.

Lidegaard pointed out that energy security was only one of three pillars of energy policy. The other two — sustainability and competitiveness — were both equally as important to address, in collaboration with partners like the EU.

He stressed that the EU was fully committed to continue expanding its dialogue with OPEC.

The EU was working hard to reduce its energy consumption, increase energy efficiency, boost the share of renewables in its supply mix and reduce its use of fossil fuels.

“We believe in the need to grow a broad energy base to ensure continuous access for our citizens to clean, cheap and safe energy that meets future challenges and demands,” he affirmed.

However, he noted that Europe was a stable buyer

“Only through cooperation
can we deliver on our
energy challenges of today
and tomorrow.”

— *Martin Lindegaard*

of OPEC petroleum and in, the foreseeable future, the Organization’s oil and gas would continue to be a significant and important part of the energy supply of the EU.

“This is as important to us as it is to you,” he told the OPEC delegates. “In the broader context, we believe that it is important to continue to maintain a balance between global oil supply and demand at affordable prices which are consistent with, and not in conflict with, long-term economic growth.”

Lidegaard said that, unfortunately, the oil and energy markets experienced significant price volatility. This, he contended, sent mixed signals to participants and distorted and delayed investment decisions.

“We need investments in production capacity and these investments need to be adequate, based on transparent and reliable information about market developments. Good quality data and forecasts of supply and demand are essential,” he said.

Lidegaard said the EU shared these needs and was consistent in its continuous work towards the region becoming an integrated, mature and secure energy market.

“It is a dynamic market and sharing our information about market developments may reduce investment uncertainty. We also share the need to identify and apply global best practices in deep offshore exploration in our areas. We propose to extend our cooperation to such offshore safety and environmental issues,” he informed.

Lidegaard stated that energy efficiency for the EU was not only an essential tool on the demand side, but also an essential tool on the supply side.

“Improved efficiency of production and transport capacity will benefit all of us. Governments and organizations have the task of facilitating such cooperation, but the real value arises in the extensive cooperation between the industry and market participants from OPEC and the EU.



Martin Lindegaard, President of the EU Energy Council and Denmark's Minister for Climate and Energy.

“I am sure that the needed political will is there to utilize our resources to the benefit of both OPEC and the EU and to expand our cooperation to cope with the new challenges.

“Only then can we ensure safe, sustainable and secure energy supply to the benefit of all and cope with the challenges now and in the future,” he concluded.

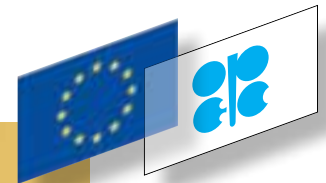
Long-term challenges

Also praising the success of the Energy Dialogue, **Dr Falah J Alamri, Iraqi Governor for OPEC**, maintained that, over the years, the initiative had become an essential element of the global producer-consumer dialogue.

“Through this process, the EU and OPEC have taken great strides in creating a positive and constructive relationship,” he said, in speaking on behalf of the OPEC Conference President

“It is important for this relationship to continue to evolve, since many of the challenges and opportunities that we face are of a long-term nature,” he affirmed.

“In fact, it is crucial that we continue to improve our understanding of our energy past, present and possible



“It is important for this relationship to continue to evolve, since many of the challenges and opportunities that we face are of a long-term nature.”

— *Dr Falah J Alamri*

future, from both the producer and consumer perspectives, as well as from the viewpoints of national oil companies and international oil companies.”

Alamri said this common understanding was particularly important for a country like Iraq as it sought to rebuild its economy, revitalise domestic markets and expand its industrial base.

“Our growing relationship with those who help us develop our natural resources, as well as those who consume them, is an essential element in the ongoing development of my country’s energy industry,” he observed.

Alamri said that since Iraq began the process of rebuilding its energy industries, the country had witnessed the participation of many international energy companies, alongside Iraqi firms.

“These partnerships have been crucial in helping the country rejuvenate and modernise its infrastructure.”

He said that in this context, Iraq welcomed “the big step forward” that was taken with the signing of the EU-Iraq Partnership and Cooperation Agreement in Brussels in December last year.

“In addition to its obvious material benefits, this important agreement highlights the faith and optimism shown by the EU in our ability to expand and develop our energy sector and economy. This is very important at this critical time,” he stated.

Alamri disclosed that Iraq currently possessed over 143 billion barrels of proven crude oil reserves, the fourth-largest in the world, and had the potential to remain one of the world’s leading producers and exporters of crude oil for decades to come.

Moreover, much of this oil was easy to access and produce. There were also many parts of Iraq that still needed to be fully explored.

“This is all good news for Iraq and the global economy as a whole,” he pointed out.

Alamri said the oil industry in Iraq would require huge investments and, in this regard, the country recognized the continuing importance of international partners.

“We are determined to establish a conducive, attractive and secure environment for foreign investments in the energy sector, as well as in other areas,” he stated.

Alamri said they faced many challenges going forward, but by continuing such dialogue as the EU-OPEC initiative in today’s world of growing energy interdependence, “we can face them more effectively together.”

He maintained that the EU-OPEC Dialogue would continue to be essential. It had evolved into a strong platform for cooperation between the two organizations and had become an important process that could “help us achieve the one goal that I know we all support — market stability.”

Also speaking at the Brussels meeting were **Neoklis Sylikiotis, Incoming President of the EU Energy Council and Minister for Commerce, Industry and Tourism of Cyprus**, and **Abdalla Salem El-Badri, OPEC Secretary General**.

Sylikiotis pointed out that EU-OPEC cooperation was extremely valuable, particularly as current oil industry and economic issues were very complex as a result of the global financial crisis.

It was, he said, gratifying to see the EU and OPEC continuing to work together in such a demanding time.

“Now, more than ever, it is increasingly important to achieve our goals,” he maintained, adding that it was essential to focus on achieving an energy balance.

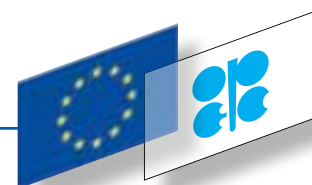
Increasing oil demand

The EU and OPEC were fully aware of the goals involved. Both needed a stable market and stable supplies, so “we need to work on this — our cooperation will continue to seek a stable and balanced market.”

The world, said Sylikiotis, would continue to need crude oil in the future, so therefore it was important to have reliable sources of petroleum.

“There will be increasing demand for oil so it is very important that we factor this into our deliberations,” he affirmed.

Sylikiotis pointed out that two-thirds of future oil supply to the EU and the world would be sourced from OPEC Member Countries, but in securing these supplies, it was important to protect the environment.



In the oil markets, he affirmed, there was a need for balanced productivity, but without unregulated speculation. Transparency, exchange of information and more investigation and research were also required.

Sylikiotis maintained that the role of future cooperation should involve industry and supply and storage issues, such as CCS. The role of biofuels also needed to be considered.

“The EU and OPEC are working together on a common basis over common concerns, such as the future of oil trade, production and supply,” he added.

El-Badri, in his address (*see full report on page 132*), highlighted the importance of a stable price, for both producers and consumers — one that was conducive for global economic growth and, at the same time, allowed producers to invest to meet future demand.

He emphasized that low oil prices could break the momentum of investment in the oil industry and in other forms of energy too. This then had a knock-on impact on future additional supply.

El-Badri reiterated OPEC’s commitment to supporting market stability in making sure consumers had secure and stable supplies, but emphasized the importance of understanding the other side of the equation — security of demand.

The Brussels meeting also received a number of technical presentations and reports.

During the first session — on the market outlook — which looked at oil market developments, energy policies and the long-term outlook, **Fabrizio Barbaso, Deputy Director General for Energy at the European Community (EC)**, provided an overview of the latest set of policies recently adopted by the Commission, with a particular emphasis on the internal energy market and the Energy Roadmap 2050.

He spoke of the need to move towards a broader energy base by 2050 and stressed the important role oil and gas would continue to play in that context, giving energy demand projections for the EU, specifically oil demand, up to 2050.

Recent oil market developments and prospects were the subject of a report delivered to the meeting by **Dr Hasan M Qabazard, Director of OPEC’s Research Division**.

He outlined the various uncertainties facing the oil market, including the debt burden and high unemployment that still existed around the global economic recovery, showing the varying effects across regions.

Qabazard pointed to the fact that the slowdown in a number of economies had become more visible with a

“Now, more than ever, it is increasingly important to achieve our goals. There will be increasing demand for oil so it is very important that we factor this into our deliberations.”

— *Neoklis Sylikiotis*

notable deceleration through declining trade activity and financial instability.

He forecast that global oil demand would witness steady growth, driven mainly by contributions from major developing countries, although policies aimed at alternative fuels, efficiency and higher taxes were viewed as a significant demand risk.

On the supply side, he highlighted that the physical market continued to be supported by adequate growth in the major producing regions, as well as appropriate stock levels.

Additionally, said Qabazard, OPEC spare capacity remained effective in reducing market pressures.

Meanwhile, **Rainer Wichern, of the EC’s Directorate General for Economic and Financial Affairs**, gave the meeting an overview of the recent economic and financial developments in the EU and Euro-zone area, based on the spring 2012 EC Commission economic forecasts that were adopted in May.

The key issues addressed were tensions in global sovereign debt markets and high oil prices, both of which were said to contribute to a loss of confidence towards the end of 2011 and the EU’s subsequent output contraction.

Advancements in the EU institutional framework to counter those developments were equally covered.

OPEC closed the meeting’s first session with an assessment of the long-term oil outlook. Presented by **Oswaldo Tapia, Head of the Organization’s Energy Studies Department**, the report underlined that oil would remain the leading fuel type in satisfying the world’s growing energy needs for the foreseeable future.

In making it clear that current petroleum resources were clearly sufficient, he pointed out that OPEC was

investing in accordance with perceived demand for its crude.

Nevertheless, he added, great uncertainties remained, including the path of the global economic recovery and policy announcements that, he said, offered confusing signals to investors, industry costs, technology and human resources.

The importance of sharing information and data covering all time frames was emphasized, as were the

Details of current and planned future joint activities of the Energy Dialogue were given by **Marcus Lippold, Policy Officer in the External Relations Unit**, and **Paula Abreu Marques, Head of Unit, both of the EC's Directorate General for Economic and Financial Affairs**.

These comprised an international roundtable on off-shore safety in oil and gas exploration and production activities, to be held in November 2012; a study assessing potential human resource demand bottlenecks in the



Hani Abdulaziz Hussain (l), Kuwait's Oil Minister, and Günther Oettinger, the EU's Energy Commissioner, discuss matters over lunch at EU Headquarters.

historical, current and possible future demand and supply scenarios.

Also reiterated were the benefits of continued participation in JODI, especially as the programme moved into more transparent data for gas.

The meeting's second session focused on the conclusions of a recent joint study, as well as proposals for, and the status of, future joint activities.

A report presented by **Garry Brennand, Senior Research Analyst in OPEC's Energy Studies Department**, underscored the final conclusions of a study on technological advances in the road transportation sector.

The study covered conventional technologies, alternative technologies and fuels, possible bottlenecks, potential drivers, such as legislative requirements and consumer preferences, and expectations for alternatives penetrating both the light and heavy duty vehicle markets.

The report also looked at how the impact of these technology advances could translate into changes in oil demand, as well as the potential differences between the big economic blocks and regions.

petroleum sector and a roundtable, to be convened in the first half of 2013; and a study on energy efficiency and its potential impact on demand, a report on which would be submitted to the 10th EU-OPEC Ministerial Meeting, scheduled to be held in Vienna, in June 2013.

Market monitoring

A communique issued at the end of the Brussels meeting stressed that participants had recognized the very challenging economic developments in many regions of the world, with knock-on implications for the global energy sector and some oil-producing regions.


"All this continues to have a profound impact on the Member Countries of both parties to the Dialogue. Significant oil price volatility, with prices trending higher in the first quarter of this year and then falling back more recently, reinforce the need for continuous market monitoring and for closer consumer-producer cooperation in the framework of energy dialogues, such as that between the EU and OPEC," it stated.



“The stable relations achieved via this Dialogue have allowed both parties to remain focused, particularly in challenging times, on constructive exchanges to foster market stability in the interests of both producers and consumers,” it added.

The communique pointed out that since the Energy Dialogue’s inception, advances had been made in several areas to assess the drivers behind oil, gas and fuel market developments, as well as expected possible futures.

This had involved more frequent contacts between the parties and encouraged greater awareness of the collective responsibility of all stakeholders when it came to handling the industry’s evolving challenges and opportunities.

“This is particularly important as changing patterns in supply, demand, trade and prices for both oil and gas emerge. It is essential to better understand the short, medium and long-term trends of these market fundamentals, which have an impact on appropriate and necessary investments to be made,” it affirmed. 

All smiles at the EU-OPEC Ministerial talks. From left to right, Dr Falah J Alamri, Iraqi Governor for OPEC; Hani Abdulaziz Hussain, Kuwait’s Oil Minister; Abdalla Salem El-Badri, OPEC Secretary General; Günther Oettinger, EU Energy Commissioner; and Neoklis Sylikiotis, Incoming President of the EU Energy Council and Minister for Commerce, Industry and Tourism of Cyprus.



Pictured outside the EU Headquarters in Brussels are OPEC team members (l-r) Garry Brennand and Nadir Guerer, both Senior Research Analysts; Dr Taher Najah, Downstream Oil Industry Analyst; Jerry Haylins and James Griffin, both Editors; and Oswaldo Tapia, Head of the Energy Studies Department.

Importance of global energy dialogue never been greater

— *El-Badri*



Above: Abdalla Salem El-Badri, OPEC Secretary General, seen giving his presentation to delegates at the EU-OPEC Ministerial Meeting (below), held at EU Headquarters in Brussels.

The importance of dialogue between the world's energy stakeholders has never been greater, according to OPEC Secretary General, Abdalla Salem El-Badri.

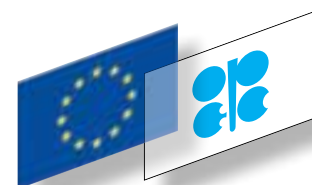
Addressing the 9th Ministerial Meeting of the Energy Dialogue between the European Union and OPEC in Brussels in June, he stated that such an initiative was important for bringing together producers and consumers to discuss the various global and interdependent issues all stakeholders faced.

He stressed that since its inception in 2005, the EU-OPEC Energy Dialogue had enjoyed much success, at both ministerial and technical levels.

"Over the years, I have witnessed much constructive dialogue take place between us and I have seen an expansion in our joint activities, with various workshops, roundtables and reports. The increasingly positive and productive nature of these activities is for the benefit of us all," he maintained.

El-Badri pointed out that OPEC very much welcomed the evolution of this cooperation.





“We value the frank exchanges, the sharing of viewpoints and the turning of ideas into concrete actions,” he stated.

The need for such dialogue and cooperation, he said, was apparent when one looked at market developments over the past year.

“It has been another eventful and testing time for the global oil and energy industries. There have been — and there remain — many challenges and uncertainties,” he affirmed.

At the heart of this, he said, was the fragile road to recovery for the global economy, something that continued to have a profound impact on countries from both OPEC and the EU.

“There remain many challenges surrounding such issues as sovereign debt, the ongoing crisis in the banking sector, high unemployment and the debate over austerity and growth,” observed the OPEC Secretary General.

He remarked that at the same time as the EU-OPEC Ministerial talks, the European Council was meeting in Brussels to try and tackle many of the challenges facing the Euro-zone.

“We hope that policymakers around the world can find the ways and means to restore the global economy to a more resilient growth path,” he stated.

El-Badri, in looking at market developments, said that oil prices had been a concern.

“Earlier this year, the price trend was higher, with geopolitical events and excessive speculation pushing prices upwards. More recently, however, given the uncertainties surrounding the global economy, prices have retreated,” he stated.

He maintained that it was important for both producers and consumers that they had a stable price.

“It needs to be a level that does not affect global economic growth, and, at the same time, a level that allows producers to receive a decent income and to invest to meet future demand.

“We need to appreciate that low oil prices can break

the momentum of investment in the oil industry and in other forms of energy too. This then has a knock-on impact on future additional supply.”

El-Badri said they had witnessed supply disruptions in Syria, South Sudan, Yemen and the North Sea. However, at the same time, Libya had taken enormous strides to bring its production back to pre-uprising levels.

“Nevertheless, what is clear is that there has been no shortage of oil in the market.”

El-Badri said he wanted to remind everyone of the other side of the equation — security of demand — stating that it was essential

“We value the frank exchanges, the sharing of viewpoints and the turning of ideas into concrete actions.”


— *Abdalla Salem El-Badri*

for producers to better understand demand-side developments, particularly policies that discriminated against oil, since none of them wanted to waste financial resources on capacity and infrastructure that might not be needed.

“This is particularly true in an industry like ours, where large-scale investments and high up-front costs are the norm,” he observed.

Concluding, the OPEC Secretary General said it was important that participants in the annual EU-OPEC meetings continually looked to advance mutual understanding of the challenges they faced.

“This will allow us to find common ground, as well as achieve a better understanding of each other. It will also help us to look for shared solutions, where and when appropriate, and further evolve an environment that is conducive to reaching constructive results.

“The EU-OPEC Energy Dialogue has been an important avenue for helping to achieve many of these goals and I am sure it will continue to be like this in the years ahead,” he concluded. 



OFID launches Ministerial Declaration on Energy Poverty, commits “minimum” \$1bn



Suleiman J Al-Herbish (standing left), OFID Director-General, with the institution's Ministerial Council in Seefeld, Austria.

OPEC Fund for International Development (OFID)

The OPEC Fund for International Development (OFID) is stepping up its poverty eradication efforts by committing at least \$1 billion to its *Energy for the Poor* initiative.

The Vienna-based institution used the Rio+20 United Nations Conference on Sustainable Development in Brazil in June to launch an OFID Ministerial Declaration on Energy Poverty, which includes the development financing.

OFID Director-General, Suleiman J Al-Herbish, made the announcement to UN Secretary General, Ban Ki-moon, during a meeting of the UN Secretary-General's High-Level Group on Sustainable Energy for All, which formed part of the Rio+20 activities.

The nine-point Declaration commits "a minimum" of \$1bn to "further augment OFID's ability to work against energy poverty."

And it said that OFID stood ready to "scale up its commitment" if demand warranted such a move.

Universal access

The Declaration called on the Rio+20 Conference to adopt universal access to modern energy services by 2030 as a goal for sustainable development.

In his meeting with the UN Secretary General, Al-Herbish referred to the Declaration in stating that while OFID had always responded to its partner countries' priorities and strategies, the institution was of the opinion that the universal eradication of energy poverty required sustained international efforts.

He stressed that access to modern energy services was vital to support all aspects of development.

Since 2007, he added, OFID had increased the share of energy projects in its total operations. In

2011, this share amounted to 25 per cent with a wide variety of operations approved.

OFID's Ministerial Declaration was approved by the institution's Ministerial Council, which held its 33rd Annual Session in Austria, a week before the Rio Meeting.

It welcomes the UN's '*Sustainable Energy for All*' initiative and recognizes that universal access to modern energy services is an objective that the international community aspires to achieve by 2030.

The Declaration said the UN initiative also provided a means to achieve the Riyadh Declaration, made at the Third Summit of OPEC Heads of State and Government in Saudi Arabia in 2007. This emphasized that eradicating poverty should be the first and overriding global priority guiding local, regional and international efforts.

It also referred to the '*Energy for the Poor Initiative*' launched in Jeddah, in June 2008, during a meeting of energy producers and consumers, which called on OFID to consider a programme of \$1bn for alleviating energy poverty.

Through the Declaration, OFID's Finance Ministers said they were reaffirming the need for the international community to afford low-income countries better chances for achieving their sustainable development aspirations, including appropriate transfer of technology.

They also pointed to the fact that energy was essential for poverty eradication and sustainable development and that access to reliable, affordable, economically viable, socially acceptable and environmentally sound energy services was crucial, particularly for developing countries.

The Declaration asserted that strong political will and long-term governmental commitment would be prerequisites to energy poverty eradication. The investment needed to ensure universal access was substantial and all available types and sources of funding would need to



Receiving the OFID Award for Development is Issa Ahmed Abdelhamid Qaraqe (l), Palestinian Minister of Detainees and Ex-detainees Affairs. He is seen here with Yousef Hussain Kamal, Ministerial Council Chairman and Minister of Economy and Finance of Qatar.

be mobilized. An enabling environment and an appropriate investment climate were seen as crucial to delivering adequate financing.

It further stipulated that efforts to eradicate energy poverty must be technology-neutral. While renewable solutions were appropriate where economics permitted, fossil fuels would continue to be an important contributor to energy supply. Poor countries could not be deprived of energy for development during the transition to a more diversified energy mix.

In addition, the Declaration said that development finance institutions needed to further harmonize their approach to combat energy poverty, share analysis and knowledge and avoid unnecessary overlaps.

In conducting its energy poverty activities, OFID will work with bilateral, regional and multilateral development institutions of its Member Countries, as well as with

sister organizations, to create synergies and to develop joint resources. The Declaration called on UN agencies and other regional and international institutions to join efforts with OFID.

The Declaration follows a successful OFID replenishment call in 2011, when Member Countries pledged \$1 bn in new resources. Speaking at the June 2012 Ministerial Meeting, OFID's Ministerial Council Chairman, Yousef Hussain Kamal, Minister of Finance of Qatar, stated that the resource boost would be further leveraged by cooperation with sister institutions and other regional and international development organizations.

"Such strategic partnerships will combine our various strengths to produce better results on the ground," he affirmed.

Replenishment

OFID's Governing Board Chairman, Jamal Nasser Lootah, also referred to the replenishment, remarking that it had helped offset the impact of the financial crisis on OFID's activities.

Al-Herbish, in highlighting OFID's growing contribution to global energy poverty alleviation efforts, told the meeting that since the Third OPEC Summit in November 2007 and the Jeddah Energy Meeting the following year, advocacy on behalf of the 'Energy for the Poor Initiative' had been "a high priority".

With the replenishment of OFID's resources, he said, substantial additional funding was also being made available.

The Ministerial Council Session, during its deliberations, also approved the institution's 2011 Annual Report, which is published in English, Arabic, French and Spanish.

It noted that, in 2011, OFID approved close to \$760 million in fresh financing for development to 60 partner countries. As of December 31, 2011, the institution's cumulative development assistance stood at \$13.8bn.

OPEC Fund for International Development (OFID)

Operations in 2011 were distributed across a number of key sectors, including \$189.9m for energy, supporting 22 operations in 24 countries, while agriculture secured \$172.6m and transportation \$171.4m. Some \$109.9m was divided primarily among the water supply and sanitation, health and education sectors.

In keeping with OFID's mandate to accord priority to the lower-income countries, \$371.8m (49 per cent) of 2011 commitments went to the Africa region, supporting 90 projects in 35 countries. Asia accounted for \$233m (31 per cent), distributed among 17 countries for 23 operations, while Latin America and the Caribbean secured \$110m (14 per cent) for nine projects in six countries. Two countries in Emerging Europe shared \$34m, with the remaining \$9.2m going to multi-regional initiatives.

As the central pillar of OFID's development activities, Public Sector operations represented the bulk (53 per cent) of approvals in 2011. A substantial amount was also channelled through the Private Sector (\$211.8m) and Trade Finance (\$117m) windows.

The Ministerial Council meeting was followed by the 139th Session of the OFID Governing Board, which approved close to \$66m in loans and grants to boost socio-economic development in over 34 partner countries.

The loans, which will support projects in the agriculture, education, energy, transportation and water supply sectors, went to Congo, The Gambia, Guinea, Mauritania, Uganda and Zambia.

The grants focus on HIV/AIDS, Palestine, a food security programme in Nepal and Bangladesh and small-scale energy initiatives across Africa.

OFID Annual Award

Meanwhile, on the sidelines of the Ministerial Council meeting, the OFID Annual Award for Development was presented to the Palestinian Minister of Detainees and Ex-detainees Affairs, Issa Ahmed Abelhamid Qaraqe,




OFID Director-General, Suleiman J Al-Herbish, announced the Ministerial Declaration on Energy Poverty at the Rio+20 UN Conference in Brazil.

who accepted the Award on behalf of the Ministry and its Ex-Detainees Rehabilitation Programme (EDRP).

Al-Herbish stated that the award had been given in recognition of the role played by the EDRP in caring for former political prisoners and their families.

He praised the programme for building a solid framework for rehabilitating social groups and working towards “a long-term solution that has a ripple effect through the entire community.”

The Ministerial Council re-elected the State of Qatar (represented by Yousef Hussain Kamal) to the Chair and elected the State of Kuwait (represented by Dr Nayef Falah Mubarak Al-Hajraf, Acting Minister of Finance) as Vice-Chair.

The next Session of the OFID Ministerial Council will be held in Doha, Qatar, on June 13, 2013. 

This section includes highlights from the OPEC Monthly Oil Market Reports (MOMR) for June and July 2012, published by the Petroleum Studies Department of the Secretariat, with additional graphs and tables. The publication may be downloaded in PDF format from our Website (www.opec.org), provided OPEC is credited as the source for any usage.

June

Crude oil price movements

The OPEC Reference Basket extended losses into a second straight month in May, to incur its biggest month-to-month decline since December 2008. It lost a significant ten per cent of its value during the month, but remained above the key \$100/barrel.

A massive speculative sell-off, brief prospects of an easing of geopolitical tensions, record crude stock-builds, weak economic data from the world's major economies and heightened concern over the stability of the Eurozone weighed heavily on the global petroleum markets, and this was echoed in the Basket price.

Commodity Futures Trading Commission (CFTC) reports showed that, during the two weeks to May 22, speculative traders reduced their net long futures and options and the two main crude oil futures by an all-time record of more than 83,000 positions.

Moreover, higher oil supply also played a key role in the easing in crude oil prices during the first half of the year. Slowing demand growth expectations in China and India also reduced key pricing support.

In May, the OPEC Basket dropped to an

average of \$108.07/b, decreasing by a hefty \$10.11/b, or 9.4 per cent, from April. However, year-to-date, the Basket averaged \$115.69/b, \$9.49/b above the same period year.

Without exception, all Basket component values decreased significantly in May, by twice as much as the previous month's losses and registering the biggest deterioration since December 2008; together they lost a sizeable \$11.30/b, on average.

Brent-related crudes – Saharan Blend, Es Sider, Bonny Light and Girassol – fell by \$9.90 to an average of \$111.40/b, down eight per cent for the month. Meanwhile, Middle Eastern crudes Murban and Qatar Marine dropped by \$9.73, or eight per cent, to \$109.19/b. The Latin American Basket components – Ecuador's Oriente and Venezuelan Merey – lost even more to average \$101.11/b in May, down by \$10.13, or nine per cent. The remaining Basket components – Arab Light, Basrah Light, Kuwait Export and Iran Heavy – also lost nine per cent of their value in May, to end at \$107.16/b, which was \$10.50 below the previous month.

Meanwhile, global crude oil futures prices took their biggest beating in almost three-and-a-half years. The Nymex West Texas Intermediate (WTI) front-month contract dropped by a strong \$8.63, or 8.4 per cent, in May, on top of the previous month's losses, while the Intercontinental

Exchange (ICE) Brent front-month plummeted by over \$10.20, or 8.5 per cent, falling for a second month in a row.

Nymex WTI front-month averaged \$94.72/b in May, the first time it was below \$100/b this year, and this was down 8.4 per cent from the April average. ICE Brent front-month fell by 8.5 per cent, or \$10.20, to end the month at an average of \$110.29/b.

Compared with the previous year, the front-month WTI year-to-date average was up by nearly three per cent, at \$101.37/b, while ICE Brent was almost six per cent higher at \$117.17/b.

Commodity markets

The World Bank's commodity price index continued to fall in the month under review, with the energy index plummeting by 7.6 per cent m-o-m in May, compared with a 3.5 per cent fall in April.

The non-energy price index dropped by 2.5 per cent m-o-m in May, compared with a milder 0.3 per cent decrease in the previous month. Food prices declined by 2.1 per cent, while base metals and gold were down by 3.8 per cent and 3.5 per cent, respectively.

In May, commodity prices continued to

OPEC Reference Basket: An average of Saharan Blend (Algeria), Girassol (Angola), Oriente (Ecuador), Iran Heavy (IR Iran), Basra Light (Iraq), Kuwait Export (Kuwait), Es Sider (SP Libyan AJ), Bonny Light (Nigeria), Qatar Marine (Qatar), Arab Light (Saudi Arabia), Murban (UAE) and Merey (Venezuela).

fall due to a firmer dollar, risk aversion, macroeconomic uncertainty and apprehension over the Euro-zone's sovereign debt crisis, as well as slower-than-expected growth in emerging economies, especially China and India.

However, the Henry Hub natural gas price jumped by 25.2 per cent m-o-m in May compared with a 10 per cent fall in April.

The World Bank's base metal price index continued to decline, falling by 3.8 per cent m-o-m in May, compared with 3.1 per cent the previous month, with the drop being felt across the whole complex. Copper and aluminium declined by 4.0 per cent and 2.1 per cent, respectively.

Gold prices tumbled by 3.5 per cent m-o-m in May, compared with a 1.4 per cent loss in the previous month.

World oil demand

Demand for OPEC crude in 2012 is projected to average 29.9m b/d, around 30,000 b/d less than in the previous report.

Within the quarters, the first three months saw a downward adjustment of 300,000 b/d, reflecting the downward revision of 230,000 b/d in world oil demand, combined with an upward revision of 40,000 b/d in non-OPEC supply.

In contrast, the fourth quarter shows an upward revision of 100,000 b/d, while the second and third quarters remain unchanged.

Required OPEC crude is forecast to see negative growth of about 100,000 b/d from 2011. The first quarter is estimated to decline by 700,000 b/d, the second quarter projected to increase by 100,000 b/d, while the third and fourth quarters are both forecast to remain unchanged, all in comparison to their respective quarters a year ago.

Demand for OPEC crude last year stood at 30.1m b/d, 400,000 b/d more than in the previous year.

Meanwhile, the first half of this year has witnessed various economic developments worldwide that have placed much uncertainty on oil demand. This has been related to two main factors – the turbulence in the world economy and

the volatility in oil prices. The effects of these are expected to last until the end of the year.

The indicators do not point clearly towards a stabilizing of the world economy. The economies of the US, Europe and, to a certain degree China are still slowing down mildly.

Hence, world oil demand in the second half of this year will face much uncertainty. US and European oil demand will contribute a large share of this uncertainty. While these two regions are squeezing oil demand, other Non-OECD regions are pushing for more oil consumption.

The US driving season might be affected by movements in retail gasoline prices and economic developments worldwide; hence, world oil demand would show a further decline and might see a cut of between 200,000 b/d and 300,000 b/d from the current forecast of the year's total growth.

Furthermore, the Japanese shutdown of their nuclear plants is leading to more fuel and crude oil usage in the power sector. Nevertheless, should Japan decide to bring its nuclear power plants back into service, its excessive oil usage would slow considerably.

Given the current world situation, world oil demand growth in 2012 is forecast at 900,000 b/d y-o-y to average 88.7m b/d.

Slowing US economic activity has been affecting oil demand. The most important sector, transportation, is still consuming less oil than it did last year. This is attributed mostly to economic activity and high retail prices. On average, an increase in retail gasoline prices of ten per cent would shave around 40,000 b/d off total consumption.

The latest monthly US oil consumption data for March shows a 6.2 per cent y-o-y contraction, the largest observed since May 2009. All main product categories fell, while the bulk of contractions were seen in distillates consumption.

The outlook for US oil consumption in 2012 remains rather pessimistic, and is dependent on the development of the economy and the transportation fuel price levels.

The latest reported figures for Mexican oil consumption in April showed a slight increase of around 0.6 per cent over the same month

last year, while Canadian oil demand in March showed a sharp decrease of 4.6 per cent, compared with 2011.

For the whole of 2011, North American oil demand shrank by 250,000 b/d. In 2012, it is projected to decrease again, but by a smaller magnitude of 60,000 b/d.

The European economy has been experiencing turbulence over the past few years. Some of the major countries' economies are going into recession, leading to a steep decline in the continent's oil demand.

European oil consumption contracted again in April, for the eighth month in a row. During the whole of 2011, it shrank by 300,000 b/d, reflecting the weak state of the European economy.

April's oil consumption in Germany, France, Italy and the United Kingdom fell as a result of decreasing demand for industrial and transport fuels. Oil demand by the European 'Big Four' decreased by 250,000 b/d in April, compared with April 2011.

The region's total contraction in oil demand stood at 300,000 b/d in 2011. For 2012, oil consumption is expected to shrink again, by 340,000 b/d, as a result of the economic turbulence in several of the regions' economies.

In Japan, the latest April monthly data is dominated once more by huge increases in crude and residual fuel oil-use, as a result of all the country's nuclear plants being shut down.

However, it might bring a few of them back into service just during the summer peak. This move would reduce direct fuel-use at that time; but there are several rules which must be met in order to re-operate any of the nuclear facilities.

During the complete shutdown of all the facilities, direct crude and residual fuel burning for electricity production is expected to increase further throughout 2012.

In South Korea, oil demand in March declined by 3.7 per cent y-o-y; the strongest declines were observed in residual fuel oil, jet fuel and LPG. In the first quarter of 2012, oil demand was flat, averaging 2.4m b/d.

OECD Pacific oil consumption grew by 40,000 b/d during 2011. It is expected to grow again in 2012, by a larger 220,000 b/d with the

bulk of the increase coming from direct crude/fuel oil burning for electricity-generation and substituting for nuclear plants.

Indian oil demand in April grew by only a marginal 0.2 per cent y-o-y. This was the lowest level of growth since October 2010. As in previous months, industrial diesel oil demand grew the most, hitting a high of eight per cent and adding another 110,000 b/d to the total diesel consumption pool.

The consumption of gasoline continued to grow by 3.7 per cent y-o-y, while naphtha, jet fuel and residual fuel oil requirements declined.

For 2012, India's oil demand is expected to grow by 120,000 b/d.

Indonesia is the second-largest oil consumer in Other Asia, after India, and its oil demand in March expanded by 3.4 per cent y-o-y, averaging 1.3m b/d. As for the total year, Indonesian oil demand is forecast to inch up by 2.0 per cent.

Given the healthy economies in most of Other Asia, the region's oil demand growth is estimated at 200,000 b/d y-o-y. This is almost one-third lower than last year's growth.

Saudi Arabian oil demand is growing again, as demand for gasoline, diesel and fuel oil rises. The country's total oil demand increased by nine per cent in April y-o-y.

Strong gasoline and diesel consumption hiked Brazilian oil demand by approximately seven per cent, or 138,000 b/d, in March y-o-y. Despite the steady rate of petroleum alcohol usage, Brazil consumed 660,000 b/d of gasoline and this trend is expected to continue for the year.

Developing countries' oil demand growth is forecast at 600,000 b/d in 2012, averaging 28.3m b/d.

Since China's economic boom is slowing slightly, its oil demand is expected to follow suit and ease. China's oil demand is expected to grow, but not at the same rate that was forecast earlier in the year. And this trend is not confined to this year, but also to the medium term. Nevertheless, transport fuel will show some strength in the upcoming years.

Chinese oil demand grew by a moderate 2.7

per cent, or 260,000 b/d, y-o-y in April, to average 9.9m b/d. The country's second-quarter oil demand growth is forecast at 450,000 b/d y-o-y.

World oil supply

Preliminary figures indicate that global oil supply averaged 90.00m b/d in May, around 75,000 b/d lower than in the previous month.

OPEC crude is estimated to have a 35.1 per cent share in global supply, steady from the previous month. The estimate is based on preliminary data from non-OPEC supply. Estimates for OPEC NGLs and OPEC production are derived from secondary sources.

Meanwhile, non-OPEC supply is expected to average 53.07m b/d in 2012, representing growth of 670,000 b/d and an upward revision of 50,000 b/d from the previous report.

Non-OPEC oil supply is estimated to have averaged 52.40m b/d in 2011, an increase of 90,000 b/d over the previous year. On a quarterly basis, last year non-OPEC supply is estimated to have averaged 52.71m b/d, 51.97m b/d, 52.04m b/d and 52.88m b/d, respectively.

Political, technical, environmental and weather issues are expected to be the main risk-factors for non-OPEC supply in 2012. On a quarterly basis, non-OPEC supply this year is expected to average 53.23m b/d, 52.71m b/d, 52.93m b/d and 53.42m b/d, respectively.

Total OECD supply is expected to average 20.72m b/d in 2012, representing an increase of 630,000 b/d and an upward revision of 120,000 b/d from the previous month. The anticipated OECD supply growth in 2012 is the highest since 1997.

The OECD forecast remains the main driver of expansion in 2012, as anticipated growth in North America is projected to more than offset the decline forecast in OECD Western Europe's supply. Yet risks and uncertainties remain high, especially in North America, which requires careful monitoring over the coming period.

On a quarterly basis, OECD oil supply this year is forecast to average 20.96m b/d, 20.54m b/d, 20.58m b/d and 20.82m b/d, respectively.

North America oil supply is projected to increase by 790,000 b/d to average 16.31m b/d in 2012, representing an upward revision of 150,000 b/d from the previous report.

The current forecast growth for 2012 is the highest in more than 30 years. The anticipated growth in North America is seen to be supported by the US and Canada, while Mexico is likely to experience a minor decline.

On a quarterly basis, North America's oil supply in 2012 is forecast to stand at 16.40m b/d, 16.18m b/d, 16.27m b/d and 16.38m b/d, respectively.

US oil production is expected to average 9.66m b/d in 2012, representing growth of 640,000 b/d over 2011 and an upward revision of 120,000 b/d from the previous report.

The current expected growth of US supply is the highest since the 1970's. US supply growth in 2012 is the highest among all non-OPEC countries and is expected to be a strong contributor to total non-OPEC supply growth. The forecast growth is supported by strong growth from the Bakken and Eagle Ford formations, as well as from the Gulf of Mexico.

On a quarterly basis, US oil supply this year is seen to average 9.72m b/d, 9.59m b/d, 9.62m b/d and 9.71m b/d, respectively.

Canadian oil supply is forecast to increase by 200,000 b/d over 2011 to average 3.75m b/d in 2012, indicating an upward revision of 30,000 b/d from the previous report.

On a quarterly basis, Canada's oil supply this year is seen to average 3.76m b/d, 3.70m b/d, 3.75m b/d and 3.79m b/d, respectively.

Mexico's oil supply is projected to decline by 40,000 b/d from 2011 to average 2.90m b/d in 2012, unchanged from the previous assessment. During the first four months of 2012, Mexico's oil supply fell by around 50,000 b/d from the same period a year ago.

On a quarterly basis, Mexico's oil supply this year is expected to average 2.92m b/d, 2.89m b/d, 2.90m b/d and 2.89m b/d, respectively.

OECD Western Europe's total oil supply is seen to average 3.91m b/d in 2012, representing a decline of 170,000 b/d from 2011 and a

minor downward revision of less than 10,000 b/d from the previous month.

This revision has come from Norway, while the UK's supply forecast remains steady. This region's oil supply is expected to experience the second-largest decline among all the non-OPEC regions.

On a quarterly basis, OECD Western Europe oil supply in 2012 is seen to average 4.07m b/d, 3.84m b/d, 3.78m b/d and 3.94m b/d, respectively.

Norway's oil supply is expected to drop by 80,000 b/d to average 1.96m b/d in 2012, indicating a downward revision of less than 10,000 b/d from the previous month's assessment. Its currently expected supply average for 2012 marks the lowest level since 1990.

On a quarterly basis, Norway's oil supply this year is anticipated to average 2.08m b/d, 1.90m b/d, 1.88m b/d and 1.97m b/d, respectively.

The UK's oil supply is anticipated to average 1.04m b/d in 2012, representing a drop of 80,000 b/d from 2011, unchanged from the previous assessment.

On a quarterly basis, the UK's oil supply this year is expected to stand at 1.09m b/d, 1.03m b/d, 990,000 b/d and 1.06m b/d, respectively.

The OECD Asia Pacific's oil supply is forecast to average 510,000 b/d in 2012, flat over 2011 and a downward revision of 25,000 b/d from a month before. Australia's and New Zealand's oil supply are expected to remain flat in 2012.

On a quarterly basis, OECD Pacific's oil supply this year is seen to average 480,000 b/d, 530,000 b/d, 530,000 b/d and 490,000 b/d, respectively.

Australia's oil supply is expected to average 420,000 b/d in 2012, flat from the previous year and a downward revision of 25,000 b/d from the previous report.

On a quarterly basis, Australian oil supply this year is seen to average 400,000 b/d, 440,000 b/d, 440,000 b/d and 410,000 b/d, respectively.

Developing countries' total oil supply is projected to decrease by 230,000 b/d from 2011 to average 12.42m b/d in 2012, indicating a downward revision of 80,000 b/d from the previous month.

The anticipated decline is driven mainly by supply from the Middle East and Africa, while Latin America's and Other Asia's supply are seen to offset the decline.

On a quarterly basis, developing countries' total oil supply this year is seen to stand at 12.41m b/d, 12.34m b/d, 12.42m b/d and 12.50m b/d, respectively.

Other Asia's oil supply is estimated to increase by 50,000 b/d in 2012 to average 3.67m b/d, unchanged from the previous assessment. Oil supply from India and Vietnam is expected to increase in 2012, while supply from Indonesia is seen to decline.

Malaysia's oil supply is expected to average 650,000 b/d in 2012, flat from the previous year, while India's oil supply is forecast to increase by 20,000 b/d to average 900,000 b/d.

On a quarterly basis, Other Asia's supply in 2012 is expected to stand at 3.65m b/d, 3.67m b/d, 3.68m b/d and 3.70m b/d, respectively. Preliminary data suggests that supply in the first quarter will witness a y-o-y decline of 50,000 b/d.

Indonesia's oil supply is forecast to decline by 30,000 b/d in 2012 to average 990,000 b/d, unchanged from the previous month, while Vietnam's oil supply is expected to experience the largest growth in the group of 40,000 b/d in 2012, to average 390,000 b/d.

Latin America's oil supply is anticipated to increase by 170,000 b/d over 2011 to average 4.92m b/d in 2012, a downward revision of 60,000 b/d from the previous report.

Argentina's supply is expected to decline by 20,000 b/d to average 710,000 b/d, while Trinidad and Tobago's supply is expected to average 130,000 b/d in 2012, a minor fall of 10,000 b/d from the previous year and representing a downward revision of 15,000 b/d from the previous report. Colombia's oil supply is expected to increase by 70,000 b/d in 2012 to average 1.00m b/d, unchanged from the previous assessment.

On a quarterly basis, Latin American oil supply in 2012 is seen to stand at 4.89m b/d, 4.88m b/d, 4.93m b/d and 4.96m b/d, respectively.

Brazil's oil supply is expected to increase by 130,000 b/d over 2011, to average 2.77m

b/d in 2012, signifying a downward revision of 45,000 b/d from the previous report.

On a quarterly basis, Brazil's oil supply in 2012 is expected to stand at 2.77m b/d, 2.73m b/d, 2.77m b/d and 2.79m b/d, respectively.

Middle East oil supply is estimated to average 1.50m b/d in 2012, a decrease of 190,000 b/d from 2011 and indicating a downward revision of 10,000 b/d from the previous month.

This revision comes from Syria, where the oil supply forecast has been revised down by 10,000 b/d from the previous month. Syria is expected to see a supply decline of 160,000 b/d in 2012 to 210,000 b/d on the back of its political issues.

Oman's oil supply is expected to increase by

“Preliminary figures indicate that global oil supply averaged 90.00m b/d in May, around 75,000 b/d lower than in the previous month.”

30,000 b/d in 2012 to 910,000 b/d, unchanged from the previous assessment.

On a quarterly basis, Middle East oil supply this year is forecast to average 1.48m b/d, 1.50m b/d, 1.50m b/d and 1.52m b/d, respectively.

Africa's oil supply is forecast to average 2.33m b/d in 2012, a decline of 260,000 b/d from 2011, indicating a downward revision of 10,000 b/d from the previous month.

The Sudans' oil supply is expected to average 140,000 b/d in 2012, down 290,000 b/d from the previous year. The decline is driven by the shutdown of South Sudan's production in January, because Sudan and South Sudan did not agree on transit fees. However, talks have restarted between the two nations and the supply forecast is at risk if it is assumed that South Sudan's output will remain shut in 2012.

On a quarterly basis, Africa's oil supply in 2012 is expected to average 2.40m b/d, 2.29m b/d, 2.31m b/d and 2.32m b/d, respectively.

Total FSU oil supply is projected to average 13.38m b/d in 2012, representing growth of 130,000 b/d over 2011 and a minor upward revision of 10,000 b/d from the previous month.

In terms of volume, the FSU remains the region with the second-highest supply after North America. The expected growth in 2012 supply is supported by Russia, Kazakhstan and Azerbaijan.

On a quarterly basis, total supply from the FSU this year is expected to stand at 13.37m b/d, 13.33m b/d, 13.37m b/d and 13.46m b/d, respectively.

Russia's oil supply is projected to average 10.34m b/d in 2012, an increase of 70,000 b/d over 2011 and unchanged from the previous month. Supply growth in the country is projected to slow in 2012, compared with previous years, mainly on limited new developments and a lower decline rate.

On a quarterly basis, Russia's oil supply this year is estimated at 10.34m b/d, 10.32m b/d, 10.34m b/d and 10.36m b/d, respectively.

According to preliminary data, Russia's supply averaged 10.33m b/d in May, slightly higher than the previous month. Supply in January-May grew by 100,000 b/d, compared with the same period of 2011.

Kazakhstan's oil supply is expected to increase by 20,000 b/d over 2011 to average 1.62m b/d in 2012, unchanged from the previous month.

On a quarterly basis, Kazakhstan's oil supply this year is seen to stand at 1.62m b/d, 1.60m b/d, 1.61m b/d and 1.65m b/d, respectively.

Azerbaijan's oil supply is also anticipated to increase by 20,000 b/d in 2012 to 970,000 b/d, representing an upward revision of 10,000 b/d from the previous month.

On a quarterly basis, Azeri oil supply this year is estimated to average 960,000 b/d, 970,000 b/d, 970,000 b/d and 1.00m b/d, respectively.

Other Europe's oil supply is seen to increase by a slight 10,000 b/d to average 140,000 b/d in 2012.

China's oil supply is forecast to increase by 70,000 b/d over the previous year to average 4.22m b/d in 2012.

On a quarterly basis, China's oil supply in 2012 is projected to average 4.16m b/d, 4.17m b/d, 4.22m b/d and 4.30m b/d, respectively.

OPEC oil production

OPEC total crude oil production averaged 31.58m b/d in May, according to secondary sources, representing a decline of 58,000 b/d over the previous month. The decrease came mainly from Iran, Nigeria, Iraq, Angola, Qatar and Algeria, while crude production from Kuwait, Libya and Saudi Arabia experienced an increase.

OPEC crude oil production in the month, not including Iraq, stood at 28.63m b/d, down 16,000 b/d from the previous month.

Output of OPEC NGLs and non-conventional oils, which averaged 5.32m b/d in 2011, an increase of 340,000 b/d over the previous year, are forecast to grow by 350,000 b/d in 2012 to average 5.67m b/d.

Downstream activity

Product market sentiment in May retreated from the improvement seen in April. This was due mainly to a loss in the top of the barrel, which resulted from disappointing naphtha demand in the worldwide petrochemical sector and the easing of the tight gasoline market in the Atlantic Basin on news of the re-starting of some refineries.

These factors, along with additional pressure from the supply side after the end of maintenance in Asia, caused refinery margins to fall across the board, despite the drop in crude prices.

The margin for WTI crude on the US Gulf Coast lost almost \$5 to stand at around \$26/b in May, on the back of losses across all parts of the barrel.

Despite the drop in the North Sea Brent price, losses in product markets led to a decline in European refining margins in May, after having peaked in April.

The European product market turned

bearish as gasoline was impacted by easing supply tightness in the Atlantic Basin, with several refineries returning from maintenance or temporary closures, amid a the lack of demand for naphtha. Thus, the fuel oil crack dropped due to oversupply in the region.

The refinery margin for Brent crude in Rotterdam showed a drop of \$2 in May to stand at around \$4.5/b.

Refining margins in Asia partially kept the recovery seen in April and although product cracks showed mixed performance, the strength at the bottom of the barrel offset the losses seen at the top.

Despite weak domestic demand, US refineries continued the upward trend in May with export opportunities continuing to lend support. This, along with weakening crude prices, encouraged refiners to keep run levels high.

US refinery runs averaged 85.4 per cent of capacity in May, 0.6 per cent higher than in the previous month, despite the shutdown of some refineries in the region.

Even at this refining level, distillate inventories continued falling during the month to stand at 118m b, below the five-year average, due to high export levels from the US to the markets worldwide and as refineries shifted their focus to gasoline ahead of the driving season.

European refiners continued to operate at moderate throughputs in response to deteriorating margins, maintenance and closures. Refinery runs stood at around 77 per cent in May.

With the end of the maintenance season and some closed refineries being re-started, refiners could be reluctant to increase runs in the coming months, despite the beginning of the driving season.

Asian refinery maintenance has peaked and refinery runs have been reduced from the high levels seen in previous months, falling from above 90 per cent to around 86 per cent. The end of maintenance could result in increased throughputs.

Japanese throughputs remained at around 72 per cent of capacity in May.

US gasoline demand recovered by around 190,000 b/d from the previous month to stand

at 8.85m b/d in May, representing an increase of 66,000 b/d from the same month a year earlier.

US gasoline demand picked up in May for the first time this year showing a y-o-y rise of one per cent. This first positive performance of demand coincided with the start of the driving season.

The market continued to be reinforced by solid demand from Latin America. The supply side gave further support on news about operational difficulties in some refineries in the region.

Middle distillate demand stood at around 3.7m b/d in May, decreasing by 60,000 b/d from the previous month and marking a recovery of 110,000 b/d from the same month last year.

Distillate stocks in the US fell further during the month to stand at around 118m b, the lowest level since the end of 2008.

Product market sentiment turned bearish as light distillates lost momentum, due to news about closed refineries re-starting in the Atlantic Basin, which eased the tightness in gasoline, and with naphtha suffering from poor demand in the petrochemical sector.

The tight situation in the European gasoline market eased with the return of several refineries from maintenance or temporary closures, leading to increased supply ahead of the driving season.

Despite lower demand in the region, the buying interest from the Mediterranean was relatively healthy, with higher diesel requirements from Turkey and France, which, along with ample exports to South America, lent support to the diesel market.

This offset the pressure coming from the supply side with some refineries re-starting after maintenance and higher inflows from the US and Asia.

Oil trade

Preliminary data indicates that US crude oil imports increased by 146,500 b/d, or 1.7 per cent, to 8.9m b/d m-o-m in May. Imports on an annual basis in May were 127,700 b/d, or 1.4 per cent, lower compared with last year's level, when they were registered at 8.9m b/d.

Product imports increased in May by 9.4 per cent than the previous month. In annual terms, a drop of 720,000 b/d, or 26.9 per cent, was registered.

Year-to-date, US crude oil imports showed a slight decline of 83,000 b/d, or 0.9 per cent, to a level of 8.7m b/d. Year-to-date data concerning products showed a decline of 73,000 b/d, or 26.8 per cent, to a level of 1.98m b/d.

Product exports decreased to 2.83m b/d in May, a decline of 136,600 b/d, or 5.1 per cent, m-o-m and 220,600 b/d, or 8.47 per cent, y-o-y.

As a result, US net oil imports increased in May to 7.96m b/d, up by 178,000 b/d, or 2.3 per cent, m-o-m. However, net oil imports remained almost 1.07m b/d, or 11.9 per cent below, the previous year's level.

Japan's crude oil imports declined in April to 3.93m b/d, representing a decline of 278,000 b/d, or 6.6 per cent, from a month earlier. Y-o-y, this represented an increase of 479,000 b/d, or 13.9 per cent.

Product imports, including LPG, increased to 1.11m b/d, which represented growth of 21,000 b/d, or 1.9 per cent, m-o-m, and a decrease of 30,000 b/d, or 2.7 per cent, y-o-y.

Product exports, including LPG, increased in April by 54,000 b/d, or 13.3 per cent, averaging 460,000 b/d. Y-o-y, there was an increase of 195,000 b/d, or 72.9 per cent.

As a result, Japan's net oil imports decreased in April by 312,000 b/d, or 6.4 per cent, to 4.58m b/d from a month before. Y-o-y, there was an increase of 254,000 b/d or 5.9 per cent.

China's crude oil imports declined in April by 129,000 b/d, or 2.3 per cent, m-o-m to 5.44m b/d. Y-o-y, China's crude oil imports increased by 176,000 b/d, or 3.3 per cent.

Product imports registered a decrease of 198,000 b/d, or 20.5 per cent, in April, m-o-m. Y-o-y, there was a decrease of 314,000 b/d, or 29.1 per cent.

China's crude oil exports in April decreased by around 36,000 b/d, or 74.8 per cent, to 12,000 b/d from a level of 49,000 b/d m-o-m. Y-o-y, there was a decrease of 59,000 b/d, or 82.8 per cent.

Oil product exports in April decreased by

around 16.5 per cent, or 84,000 b/d, m-o-m. Y-o-y, they dropped by 205,000 b/d, or 32.7 per cent.

As a result, China's total net oil imports decreased in April by 207,000 b/d, or 3.5 per cent, m-o-m to stand at 5.77m b/d.

India's crude oil imports increased by 38,000 b/d, or 1.1 per cent, m-o-m in April to stand at 3.57m b/d. Y-o-y, India's crude oil imports decreased by 166,000 b/d, or 4.4 per cent, compared with the 2011 level.

Product imports in April increased by 60,000 b/d, or 21.6 per cent, m-o-m to an average of 336,000 b/d.

Product exports decreased by 174,000 b/d, or 14.3 per cent, in April to stand at 1.04m b/d.

As a result, India's net oil imports increased by 271,000 b/d, or 10.5 per cent, to an average of 2.87m b/d. Y-o-y, there was a decrease of 71,000 b/d, or 2.4 per cent.

Total FSU crude exports rose by 4.3 per cent to 6.62m b/d, with pipeline crude exports rising by 5.0 per cent to 4.28m b/d compared with the month before.

FSU product exports rose in April by 4.0 per cent, or 368,000 b/d, to 2.84m b/d.

Stock movements

US total commercial oil stocks reversed the draw of the previous month and rose considerably – by 17.7m b – to end May at 1,087.3m b, the highest level since November 2011.

Thus, inventories stood at 9.1m b, or 0.8 per cent, above the level seen a year ago, while the surplus with the five-year average was 29.7m b, or 2.8 per cent. The build was attributed to both crude and products.

In May, US commercial crude stocks continued the upward trend of the last five months, increasing by 8.8m b for a cumulative build since the start of this year of around 53.7m b.

Having reached a total of 384.6m b, they stood at the highest level since 1990, widening the surplus with a year ago to 14.9m b, from 6.5m b a month earlier.

The gain versus the five-year average widened more and stood at 35.7m b in May from 23.3m b a month ago.

The build came from continued strong crude imports and domestic production.

US Cushing stocks rose by 4.8m b in May to reach an all-time high of 47.8m b. However, this number should begin to fall as some volumes flow south on the reversed Seaway pipeline.

Looking forward, US crude inventories should continue building in other areas as US crude oil imports are expected to rise, reflecting strong OPEC production. But the build in US crude oil inventories could be limited by expected higher crude runs.

US product stocks reversed the drop of the last four consecutive months and increased by 9.0m b in May to end the month at 702.7m b.

Despite the build, product stocks showed a deficit of 5.8m b, or 0.8 per cent, over the same time last year and were 6.0m b, or 0.8 per cent, lower than the five-year average.

All the build in products came from propylene and unfinished products, while major products such as gasoline and distillates showed a drop.

Gasoline stocks fell by 6.2m b for the fourth consecutive month, ending at 203.5m b, while distillate stocks also saw a fall of 6.2m b in May, following five months of decline, to 120.0m b. Residual oil stocks continued their downward trend and fell for the second consecutive month – by 1.6m b – to end May at 31.0m b.

Commercial oil stocks in Japan in April rose by 8.3m b to stand at 172.7m b, the highest level since November 2011.

Commercial crude oil stocks grew further in April, increasing by 2.8m b to stand at 103.6m b, the highest level since July 2011, while total product inventories reversed the decline that occurred in the last two months and rose by 5.7m b to end the month of April at 69.2m b.

With the exception of gasoline, all products saw a build, with naphtha increasing the most. Gasoline stocks declined slightly by 200,000 b to end April at 14.1m b, while distillate stocks rose by 1.9m b in April, after four consecutive months of decline, ending the month at 27.2m b.

In Singapore, product stocks fell by 4.3m b for the second consecutive month to end April at 38.5m b. Within products, middle distillates and fuel oil inventories saw a drop, while light

distillates remained almost unchanged. At 8.9m b, middle distillate stocks ended April at 700,000 lower than the previous month, while

April product stocks in the Amsterdam, Rotterdam and Antwerp (ARA) region reversed the build that occurred the previous month to fall by 3.4m b and end the month at 31.2m b, the lowest level since the end of last year.

Within products, gasoline, gasoil and fuel oil saw a drop, while naphtha and jet fuel oil indicated a minor decline. Gasoline stocks fell slightly by 200,000 b to 5.4m b, while gasoil stocks fell by 2.1m b, ending April at 17.8m b. Fuel oil stocks saw a draw of 1.1m b to end the month of April at 3.8m b, while jet fuel stocks fell marginally to stand at 3.3m b, the lowest level in almost five months. Naphtha stocks saw a minor decline to end April at 900,000 b.

July

Crude oil price movements

In June, the OPEC Reference Basket continued its quarter-long declining streak for the third consecutive month to settle below \$100/b for the first time in a year-and-a-half.

The drop in the value of the Basket in June was a significant 13 per cent, the highest month-to-month decline since the 22 per cent drop back in December 2008.

Besides a gloomy economic picture, particularly in the Euro-zone, the main factors driving down the Basket were speculators, who increasingly sold off long positions, in addition to abundant crude oil supplies.

A month-long series of headlines about weak economic data from China and the US indicating that economic worries are not limited to the Euro-zone also shaped bearish market sentiment, prompting investors to massively liquidate positions to limit exposure.

Similar to the previous month, accumulated long positions continued to exit the market significantly over the entire month of June in both main futures markets through large-scale sell-offs that have signaled growing weakness in the crude oil markets.

In June, the OPEC Basket fell to an average of \$93.98/b, the first time it reached a level below the key \$100/b since January 2011. The Basket lost a hefty \$14.09/b or 13 per cent compared with the previous month, which is the highest decrease since the \$11.16/b decline seen three-and-a-half years ago.

Nevertheless, for the first half of 2012, the Basket averaged \$112.07/b, \$5.40/b above the same period in 2011.

The values of all Basket components diminished significantly in June, with Saharan Blend, Es Sider, Bonny Light and Girassol falling by \$15.31 to an average of \$96.09/b, down by a hefty 13.75 per cent for the month.

Meanwhile, Middle Eastern crudes Murban and Qatar Marine, along with Latin American Basket components like Ecuador's Oriente and Venezuelan Merey, dropped by around 12 per cent to \$95.81/b and \$88.37/b, respectively.

The remaining Basket components, Arab Light, Basrah Light, Kuwait Export and Iran Heavy, lost 13 per cent of their value in June to end at \$93.24/b, \$14.02 lower than in the previous month.

On July 10, the OPEC Basket improved to \$96.43/b, \$2.45 above the June average.

In June, both crude oil futures contracts, ICE Brent and Nymex WTI, slipped further to multi-month lows as both shed over 13 per cent of their value, the highest m-o-m reduction since the 25 per cent loss seen during the global financial crisis in late 2008.

In June, the Nymex WTI front-month contract declined by \$12.31 on top of a \$11.49 fall since the beginning of the second quarter to accumulate a hefty \$23.80 in losses over one quarter, erasing the previous two consecutive quarters' gains.

Meanwhile, ICE Brent front-month contract losses over June and the second quarter were much bigger, with a \$14.36 and \$28.62 decline, respectively.

The worsening economy, predominantly in the Euro-zone, and speculators increasingly going less long in their positions, as well as the signs of a global crude oil stock build, were the main factors driving prices down.

CFTC data showed that Nymex WTI net

long positions fell to their lowest levels since September 2010, dipping by nine per cent from the previous month. ICE Brent net long positions declined the most – by a stunning 49 per cent – since late May, according to ICE data.

The Nymex WTI front-month contract averaged \$84.41/b in June, the first time since October 2011 that it was less than \$90/b, and down by 13 per cent from the average in May.

The ICE Brent front-month also fell by 13 per cent, or \$14.36, to end the month at an average of \$95.93/b, the first time it fell below the key \$100 in the last year-and-a-half.

Compared with the previous year, the front-month WTI year-to-date average stood almost at the same level as in the same [period of 2011, at \$98.21/b, while ICE Brent was higher by almost two per cent at \$113.63/b.

On July 10, prices for Nymex WTI and ICE Brent improved to \$83.91/b and \$97.97/b, respectively, higher by \$1.50 and \$2.04 than the June average.

Commodity markets

The World Bank's Commodity Price Index declined significantly in June m-o-m. Prices for energy dropped by 12 per cent, compared with a 7.7 per cent drop a month earlier.

The non-energy component lost 3.6 per cent m-o-m, compared with a 2.5 per cent fall in May, the third consecutive decline. Food prices edged down by 1.2 per cent, compared with a 2.1 per cent loss during the previous month, while gold prices rebounded by 0.6 per cent, compared with a 3.6 per cent m-o-m drop a month earlier.

Base metal prices plummeted by 6.1 per cent, compared with a 3.8 per cent fall during the previous month. Less affected were some agricultural commodities, due to dry weather.

The same bearish factors that have weighed down commodity markets continued to exert pressure on prices in June: macroeconomic uncertainty, especially apprehension over the Euro-zone's sovereign debt crisis, as well as slower-than-expected growth in China and India. A firmer

dollar and growing risk aversion also added to pressures.

It must be noted that recent commodity price declines are the steepest since the months following the Lehman crisis of 2008, which suggests markets are pricing in a further deterioration in Chinese economic growth and little progress with regard to the European debt crisis.

The Henry Hub natural gas price rose by 0.7 per cent m-o-m in June, compared with a 25.2 per cent rise in May.

The agricultural price index fell by 2.8 per cent m-o-m, compared with a 1.7 per cent drop during the previous month. As with most other commodities, agricultural markets continued being driven by macroeconomic factors and risk aversion.

In base metals, the price drop took place across the whole complex with aluminium and copper declining by 5.9 per cent and 6.7 per cent m-o-m, respectively.

Gold prices rose slightly by 0.6 per cent m-o-m, which compared positively to a 3.6 per cent decline during the previous month.

World oil demand

Demand for OPEC crude for 2012 has remained unchanged from the previous report. However, the second quarter has seen a downward revision of 100,000 b/d, while the third quarter has been revised up by 100,000 b/d. The first and fourth quarters remain unchanged from the previous assessment.

Demand for OPEC crude stands at 29.9m b/d in 2012, representing a decrease of 100,000 b/d from last year's level. The first quarter is estimated to have declined by 700,000 b/d from the same quarter last year. The second and fourth quarters are estimated to remain unchanged from the same period last year.

Based on the first forecast for demand and non-OPEC supply (including OPEC NGLs and non-conventional oil) for 2013, demand for OPEC oil next year is projected to decline for the second year running, by 300,000 b/d to average 29.6m b/d.

The first quarter is expected to increase by 200,000 b/d, while the following three quarters are projected to decline, with the bulk of the decrease in the fourth quarter, with a forecast drop of 700,000 b/d.

Meanwhile, generally, various economic developments worldwide are virtually offsetting each other, leaving the total oil consumption picture nearly unchanged from the previous month.

US demand is weakening further due to a sluggish economy, the European economic turbulence is suppressing that continent's demand, and Indian demand is negatively affected by the recent massive floods.

In contrast, the shutdown of most of Japan's nuclear power plants has led to the excessive use of crude and fuel oil-burning.

The first half of this year has witnessed various economic developments worldwide which have created much uncertainty about oil demand. And the second half of the year may experience similar uncertainty, since the world economy is in an uncertain state.

US and European demand will contribute the largest share of the uncertainty. Hence, world demand prospects in the second half will remain vague. While these two regions are squeezing down oil demand, other, non-OECD regions' demand is pushing for more consumption.

Furthermore, the Japanese shutdown of its nuclear plants is leading to more fuel and crude oil usage in the power sector. Nevertheless, should the country decide to bring its nuclear power plants back into full-scale service, the country's excessive oil usage would slow dramatically.

Given the current global situation, world oil demand growth is forecast at 900,000 b/d y-o-y to average 88.7m b/d.

US oil consumption data for April shows a 1.7 per cent y-o-y contraction. This is the 13th consecutive decline, since the last growth observed for US monthly oil consumption was for March 2011.

All main product categories, with the exception of gasoline and propane propylene, fell and the bulk of contractions were seen in

residual fuel oil and distillate consumption, as a result of decreasing industrial production and fuel-switching to natural gas.

The first six months of 2012 were generally quite disappointing for US consumption, with contractions in all product categories and this was especially strong for residual fuel oil, distillates and gasoline.

Preliminary weekly data for May and June shows no real improvements to US consumption, with it decreasing by around one per cent each month.

Nevertheless, the prospects for US consumption for the rest of 2012 remain rather pessimistic, depending upon the development

transportation fuels, due in turn to relatively high prices and rigorous taxation.

Nevertheless, the short-to-medium-term development of European oil consumption will be determined most of all by the continuing debt problems in several of the continent's economies.

Since regional oil demand has already dipped sharply, the effects of further negative economic setbacks are not likely to be that strong.

European 'Big Four' oil demand decreased by 70,000 b/d in May, compared with the same month a year earlier. The Big Four's consumption of industrial fuels and transportation fuels accounted for the bulk of these decreases.

For 2012, OECD Europe's oil consumption is expected to shrink by 340,000 b/d y-o-y to average 13.9m b/d.

In Japan, the latest May 2012 monthly data is dominated once more by huge increases in the direct use of crude and residual fuel oil, as a result of nuclear plants being shut down.

Due to the shutdown of most of these plants, and in combination with stricter stress tests being one of several conditions for their restarting, direct crude and residual fuel burning for electricity production is expected to increase throughout 2012.

Power plants are using crude — and only those crudes with a low sulphur content — fuel oil and liquefied natural gas (LNG) for electricity power generation.

In South Korea, April oil product sales climbed strongly, increasing by 5.8 per cent y-o-y; the biggest additions have been observed in gas/diesel oil and gasoline.

OECD Pacific oil consumption is expected to grow by 290,000 b/d in 2012, with the bulk of the increase coming from direct crude/fuel oil burning for electricity generation and the substitution of nuclear plants.

India's recent floods will affect the country's fuel consumption for June, not only in agriculture, but in the transport sector as well. Total oil demand is forecast to grow this year by 3.5 per cent y-o-y, despite the big increase in the first quarter.

Demand in May was strong, touching on a 5.4 per cent increase y-o-y. The use of liquefied petroleum gas (LPG), diesel and naphtha led to this growth.

Diesel use was up by a massive nine per cent, adding another 120,000 b/d to the country's total oil demand. Strong demand for diesel is expected to last until the end of the year, as long as the government does not interfere and increase retail prices.

The country's gasoline demand plunged by four per cent, as a result of the price increases which were introduced by the oil companies in May. For 2012, India's oil demand is expected to grow by 120,000 b/d y-o-y.

Indonesia is the second-largest oil-consumer in 'Other Asia', after India; it will consume 1.4m b/d of oil by the end of 2012. It is forecast that the country's oil demand will be 5.4 per cent higher this year than last.

This strong demand is related to economic activity which has pushed up the nation's GDP by 5.8 per cent this year. The country's second-quarter oil demand is expected to grow by 30,000 b/d y-o-y.

Given the healthy economies in most of Other Asia, this region's oil demand growth is estimated at 200,000 b/d in 2012 y-o-y.

A decline in crude-burning reduced Saudi Arabian oil demand by 4,000 b/d in May y-o-y. However, this is not expected to be repeated in the peak of the summer, where demand for electricity is at its highest.

Saudi motorists consumed almost half a million barrels of gasoline daily in May. Transportation fuel is growing at a fast rate, as a result of strong economic activity.

Middle East oil demand is forecast to grow by 2.4 per cent, to average 7.7m b/d in 2012.

Despite the decline in gasoline usage, Brazilian oil demand grew by 3.2 per cent in April y-o-y. Energy-related alcohol demand rose by more than one-third. The country's average consumption of energy-related alcohol is Latin American oil demand is expected to increase by 200,000 b/d to 6.5m b/d in 2012.

Developing countries' oil demand growth is forecast at 600,000 b/d y-o-y in 2012, to average 28.3m b/d.

With its economic boom slowing slightly, China's oil demand is easing somewhat, leading to an increase in the export of diesel. But demand is not expected to come down

“... global economic challenges are causing a great deal of uncertainty for the 2013 oil demand forecast.”

of the economy and the transportation fuel price levels.

Reported data for Mexico in May shows a strong increase in consumption of around five per cent, compared with the same month last year. All product categories were positive, except fuel oil, with increases in industrial fuels dominating.

As for Canadian oil usage, the latest available oil demand data indicates a sharp increase of 4.9 per cent y-o-y; oil-usage in transportation and industrial products dominates this increase.

In 2012, North American oil demand is projected to decrease by 140,000 b/d to stand at 23.4m b/d.

European oil consumption contracted again in May, the ninth month in a row. Consumption in Germany, France, Italy and the United Kingdom fell, as a result of decreasing demand for industrial fuels. This was caused by weak industrial activity and shrinking

drastically. It has been buoyant most of the time, as the country's thirst for energy never ends.

Oil demand in May increased by a strong 5.2 per cent y-o-y. This sharp increase was the result of higher consumption of gasoline and diesel. Transport fuel has been the mover in China's oil demand growth over the past few years.

Diesel usage increased by 7.8 per cent, or 138,000 b/d, in May y-o-y. Diesel has been the dominant petroleum product in China. It is used by the transport, industrial and agricultural sectors. Almost one-third of the oil used in China comes as diesel and this trend is expected to remain for the medium term.

China's oil demand is expected to continue to grow, but not at the same rate as anticipated earlier in the year. China's second-quarter oil demand growth is forecast at 450,000 b/d y-o-y.

Meanwhile, global economic challenges are causing a great deal of uncertainty for the 2013 oil demand forecast. World GDP growth for next year is forecast slightly lower than for this year. The slowdown is expected not only in OECD economies, but also in the non-OECD.

As for total world economic growth, this will be almost 0.1 per cent below that of 2012; most of this reduction is related to the OECD region.

Economic growth in China and the Middle East is forecast to be less than that of 2012. As seen so far this year, total world oil demand growth is expected to take place in the non-OECD area, mainly China, India, the Middle East and Latin America.

Although any possible rise in oil prices is expected to have a negative effect on transportation fuel demand, the sectors that will contribute the most to total oil demand are industry and transport.

Industrial and petrochemical activity is expected to push up oil demand next year in the non-OECD region.

US gasoline demand will be mostly dependent upon oil prices. Gasoline consumption is expected to be slightly higher than this year; however, it will remain the wild card for

2013, since it could also be negatively influenced by the pace of the country's economic recovery.

World oil demand is forecast to continue to grow during 2013, to reach 800,000 b/d y-o-y and average 89.5m b/d, which will be 70,000 b/d lower than the estimate for the current year.

As with this year, industrial fuel, mainly diesel and naphtha, will be the products that will experience the biggest growth in world oil demand in 2013, since the industrial sector will be the key oil consumption driver.

This will be supported to a certain degree by both the non-OECD and the OECD. Furthermore, as seen this year, oil demand in 2013 will start from a high baseline; however, given slightly stable economic activity, this will push up gasoline and jet fuel consumption.

Yet, the bulk of gasoline demand will come from the growing transport sector in non-OECD countries, as well as some amounts from North America and the Pacific.

Efficiency in the auto industry has been improving and is affecting energy consumption. Governments are placing emphasis on allocating large amounts of subsidies to efficient vehicles, such as hybrids and electric cars.

Oil demand growth of 980,000 b/d in non-OECD countries will again account for almost all world oil demand growth next year, whereas the OECD region will show a 0.4 per cent demand contraction.

The OECD region is expected to consume 160,000 b/d less oil next year than this year. This decline is attributed to the economically troubled Europe and US.

The decline in OECD Europe oil demand is the result of the debt problems on the continent leading to a slowing economy.

The EU 'RED' directive, which mandates the share of renewables to reach 20 per cent of total energy use by 2020, will affect next year's total oil demand across Europe. North America's oil usage is expected to be almost flat. The US will be the wild card for the oil demand forecast this year as well.


The product that will affect the total

demand estimate is gasoline. Prices and slow economic activity are the factors that are putting the transportation sector's fuel use in a stagnant state.

Furthermore, the OECD Pacific, mainly Japan, will continue to show a slight increase of 0.8 per cent, as a result of the economic recovery from the 2011 earthquake devastation and the shutdown of the nuclear power plants.

Finally, normal efficiency trends, higher energy taxes, energy conservation, efficiency, alternative fuels and other factors are also contributing to the decline in OECD demand.

As a result, OECD demand is forecast to decline by only 160,000 b/d y-o-y in 2013, to average 45.3m b/d.



“World oil demand is forecast to continue to grow during 2013, to reach 800,000 b/d y-o-y and average 89.5m b/d.”

China's oil demand in 2013 will be marginally lower than this year, as the country's GDP estimate is low to start with. An upward risk does exist, since the country's economy might perform better than anticipated. Most economic sectors are expected to perform strongly, calling for increased energy usage.

The sectors that will affect energy demand the most are the transportation, industrial and agricultural ones. As seen in 2012, China is expected to contribute the most to world oil demand growth in 2013.

China's apparent oil demand is forecast to grow by 400,000 b/d y-o-y in 2013, which is 50,000 b/d lower than the estimate for the current year.

India and the Middle East are estimated to show annual oil demand growth of 100,000 b/d and 170,000 b/d, respectively, in 2013. As was the case in 2012, the transport, construction and petrochemical sectors will be the

main drivers behind the strong Middle East oil demand next year as well.

India's GDP has declined during the course of the year, and next year's GDP is forecast at 6.4 per cent.

OPEC's world oil demand forecast for 2013 is based on the following assumptions:

- World GDP will grow at a slightly slower rate than last year.
- Oil prices will have an impact on transport fuel demand.
- Normal weather is assumed.
- The US economy is expected to stabilize; however, the rest of the OECD economies are facing some turbulence.
- US oil demand is expected to be flat; but it will remain as a wild card in 2013 oil demand.
- OECD economic movements will provide a major amount of uncertainty.
- Further domestic price and tax hikes are expected in most of the non-OECD area.
- Further policies directed towards a reduction in energy use will take place next year worldwide.
- Most governments will place an emphasis on energy conservation and increase the use of alternative fuel.
- The Chinese economy is forecast to grow at 8.0 per cent in 2013, down slightly from 2012.
- The Middle Eastern economy is expected to slow slightly next year, compared with this year.
- Various factors will slightly reduce oil demand growth in Other Asia and Latin America, such as price subsidy-removal, fuel-switching and energy-conservation programmes.
- There will be a stronger utilization of nuclear and coal-power plants.
- The continued shutdown of most of Japan's nuclear power plants is assumed.
- The world will see a strong movement towards the use of smaller, more economical vehicles, such as hybrid and electric cars.
- Most of the growth in oil usage will be in the transport, industrial and petrochemical sectors.

There is a wide range of uncertainty affecting next year's oil demand forecasts. This suggests the need for two more scenarios for an upper and a lower range for oil demand growth.

The 'upper' range is forecast at 1.0m b/d, which will reflect settlement in oil prices, strong demand growth in the US, improvements in OECD Europe's economies and a serious recovery in Japan.

It is suggested that a quick recovery in the US economy, along with a stronger dollar, will lead to cheaper oil for US consumers. A healthy US economy will speed up other non-OECD economies as well, such as the Middle East, Other Asia and Latin America.

One important factor that might affect world oil demand is the price of natural gas. The Japanese nuclear power plant shutdowns could be prolonged until the end of next year, leading to further crude- and fuel oil-usage in conventional power plants.

The 'pessimistic' approach suggests lower oil demand growth of 650,000 b/d, reflecting a delay and more turbulence in the economic recovery within OECD countries, which might spill over to other economies. Higher gasoline prices would have a reflex effect on US motorists. Strong retail petroleum product prices would suppress transport fuel consumption, mostly in the OECD.

Weaker gasoline consumption alone could trim at least 100,000 b/d from the expected oil demand growth next year. China's and India's efforts to remove price subsidies and place more taxes on fuel would put a dent in oil usage, mainly for transport fuel.

If the winter is warm, then a further decline in winter products will be seen. Should natural gas prices in 2013 show a further decline, then fuel oil consumption would decrease worldwide as a result of further fuel-switching, especially during a strong winter.

World oil supply

Preliminary figures indicate that global oil supply averaged 89.72m b/d in June, around 100,000 b/d lower than in the previous month.

The estimated decrease was driven by an OPEC crude oil output decline. OPEC crude is estimated to have a 35 per cent share in global supply, steady from the previous month. The estimate is based on preliminary data from non-OPEC supply, estimates for OPEC NGLs and OPEC production are derived from secondary sources.

Meanwhile, non-OPEC oil supply is forecast to average 53.06m b/d in 2012, an increase of 670,000 b/d over 2011, indicating a minor upward revision of 10,000 b/d from the previous report.

Upward revisions have affected the supply forecasts for the US, Canada, Mexico, Thailand and South Africa, while the oil supply projections for Norway, Other Western Europe, Indonesia, Vietnam, Brazil, Colombia and Azerbaijan were revised down.

On a quarterly basis, non-OPEC supply in 2012 is seen to stand at 53.24m b/d, 52.76m b/d, 52.86m b/d and 53.38m b/d, respectively.

The non-OPEC supply forecast in 2012 continues to be associated with a high degree of risk, due to various factors, such as political, technical and weather-related issues, maintenance and decline rate developments.

OECD oil supply is expected to average 20.78m b/d in 2012, which is 690,000 b/d higher than in 2011 and represents an upward revision of 60,000 b/d from the previous month.

US supply has been revised up by 30,000 b/d from the previous assessment to stand at 9.69m b/d, constituting a rise of 670,000 b/d in 2012, the highest growth among all non-OPEC countries.

The 2012 supply forecasts for Canada and Mexico have been revised up by 30,000 b/d and 10,000 b/d, respectively. Canada's oil supply is expected to increase by 220,000 b/d in 2012 to average 3.78m b/d, while Mexico's oil supply is seen to average 2.91m b/d.

Norway's oil supply forecast for 2012 has been revised down by 5,000 b/d from the previous report. The country's output is forecast to average 1.95m b/d in 2012, a decline of 80,000 b/d from the previous year.

The UK's oil supply is expected to drop by 90,000 b/d in 2012, compared with the previous year, unchanged from the previous month.

Other Asia's oil supply is forecast to average 3.67m b/d in 2012, an increase of 40,000 b/d over 2011, constituting a downward revision of 10,000 b/d from the previous report.

Indonesia's supply is seen to average 980,000 b/d in 2012, a decline of 40,000 b/d from last year. On the other hand, Vietnam's supply outlook has been revised up. It is now seen as averaging 380,000 b/d in 2012, an increase of 30,000 b/d over last year.

Latin America's oil supply is projected to increase by 130,000 b/d in 2012 to average 4.87m b/d, representing a downward revision of 40,000 b/d from the previous month.

Brazil's oil supply is expected to increase by 100,000 b/d in 2012 to average 2.74m b/d, a downward revision of 30,000 b/d from the previous report.

Colombia's oil supply is forecast to increase by 60,000 b/d in 2012 to average 990,000 b/d, indicating a downward revision of 10,000 b/d from the previous month.

The FSU's oil supply is expected to average 13.37m b/d in 2012, constituting growth of 120,000 b/d over the previous year and a minor downward revision of 10,000 b/d from the previous report.

Russia's oil supply is seen to average 10.34m b/d in 2012, which is 70,000 b/d more than in the previous year and unchanged from the last report.

According to preliminary data, Russia's oil supply averaged 10.31m b/d in June, relatively steady from the previous month.

China's oil supply is expected to average 4.22m b/d in 2012, an increase of 80,000 b/d over 2011 and steady from the previous month. China's output in May averaged 4.19m b/d, steady from the previous month and the same month last year.

However, cumulative production till May 2012 indicates a decline from the figure for the same period in 2011.

Looking at projections for 2013, non-OPEC oil supply next year is expected to increase by 920,000 b/d over 2012 to average 53.98m b/d. Its overall growth trend is expected to continue in 2012, supported by North America,

Latin America and the FSU and partly offset by declines in OECD Europe.

On a quarterly basis, non-OPEC supply in 2013 is expected to average 53.62m b/d, 53.59m b/d, 53.95m b/d and 54.75m b/d, respectively.

Total OECD oil supply is forecast to average 21.13m b/d in 2013, representing an increase of 350,000 b/d over 2012. Expected supply growth from the US, Canada and Australia is seen to offset the declines anticipated in other OECD countries.

On a quarterly basis, OECD oil supply in 2013 is expected to average 21.02m b/d, 20.98m b/d, 21.03m b/d and 21.48m b/d, respectively.

North America's oil supply is predicted to increase by 470,000 b/d in 2013 to average 16.85m b/d. The anticipated growth from the US and Canada is expected to offset the projected decline in Mexico.

The risk associated with the North American supply forecast remains on the high side, given the effect of weather conditions, decline rates and technical and economic issues.

On a quarterly basis, North America's oil supply in 2013 is seen to stand at 16.62m b/d, 16.73m b/d, 16.86m b/d and 17.18m b/d, respectively.

US oil supply is expected to average 10.07m b/d in 2013, an increase of 370,000 b/d over 2012. This increase will be the highest among all non-OPEC countries and at the highest annual level since 1986.

The outlook in 2013 is supported by the anticipated healthy onshore shale developments, aided by rising investment.

Biofuel production is projected to provide further support to US output in 2013 to meet the renewable fuel requirements. US NGL supply is also seen to increase in 2013.

On a quarterly basis, US oil supply in 2013 is expected to average 9.91m b/d, 10.02m b/d, 10.05m b/d and 10.28m b/d, respectively.

Canada's oil supply next year is forecast to grow by 170,000 b/d over 2012 to average 3.95m b/d. This will be the second-highest growth level among all non-OPEC countries next year, supported by both oil sands and shale projects.

On a quarterly basis, Canada's oil supply in 2013 is predicted to average 3.84m b/d, 3.89m b/d, 3.98m b/d and 4.09m b/d, respectively.

Mexico's oil supply is forecast to average 2.83m b/d in 2013, a decline of 80,000 b/d from 2012.

On a quarterly basis, Mexico's oil supply in 2013 is expected to average 2.87m b/d, 2.82m b/d, 2.83m b/d and 2.81m b/d, respectively.

Total OECD Western Europe oil supply is seen to fall by 140,000 b/d from 2012 to average 3.76m b/d in 2013. Declines are predicted for all the major OECD Europe producers, with quarterly figures expected at 3.90m b/d, 3.72m b/d, 3.68m b/d and 3.77m b/d, respectively.

Norway's oil supply is forecast to decline



“Preliminary figures indicate that global oil supply averaged 89.72m b/d in June, around 100,000 b/d lower than in the previous month.”

by 80,000 b/d over 2012 to average 1.88m b/d in 2013.

On a quarterly basis, Norway's oil supply in 2013 is seen to average 1.97m b/d, 1.86m b/d, 1.80m b/d and 1.88m b/d, respectively.

The UK's oil supply is anticipated to average 990,000 b/d in 2013, a drop of 50,000 b/d from 2012. The expected annual production level in 2013 will be the lowest since 1977.

On a quarterly basis, UK oil supply is expected to stand at 1.04m b/d, 970,000 b/d, 950,000 b/d and 1.00m b/d, respectively.

Denmark's oil supply is estimated to decline by 20,000 b/d from 2012 to average 180,000 b/d in 2013.

Other Western Europe's oil supply is seen to remain steady in 2013, compared with this year, to average 700,000 b/d.

The OECD Pacific's oil supply is projected

to average 530,000 b/d in 2013, indicating growth of 20,000 b/d from this year.

On a quarterly basis, total oil supply from the Asia Pacific in 2013 is estimated to average 500,000 b/d, 530,000 b/d, 540,000 b/d and 530,000 b/d, respectively.

Australia's oil output is forecast to increase by 30,000 b/d in 2013 to average 450,000 b/d.

On a quarterly basis, Australia's oil supply in 2013 is seen to stand at 420,000 b/d, 460,000 b/d, 470,000 b/d and 450,000 b/d, respectively.

New Zealand's oil supply is estimated to decline by 10,000 b/d over 2012 to average 80,000 b/d in 2013.

Total developing countries' oil supply is projected to average 12.67m b/d in 2013, representing growth of 300,000 b/d over this year. The increase will come mainly from Latin America, supported by growth in Brazil and Colombia, followed by the Middle East and Other Asia, while Africa's supply is seen to remain steady during the year.

“Total OPEC crude oil production averaged 31.36m b/d in June, representing a decline of 106,000 b/d, compared with the previous month, according to secondary sources.”

However, a high level of risk and uncertainty surrounds the developing countries' forecast, including political, technical, price, decline-rate and weather issues.

On a quarterly basis, total oil supply in the developing countries in 2013 is forecast to average 12.48m b/d, 12.52m b/d, 12.75m b/d and 12.94m b/d, respectively.

Other Asia's oil supply is expected to

increase by 50,000 b/d over 2012 to average 3.72m b/d in 2013. Malaysia's supply is seen to lead this growth and average 690,000 b/d, an increase of 40,000 b/d over 2012.

India's supply is expected to increase by 30,000 b/d in 2013 over this year and average 930,000 b/d, while Vietnam's supply is seen to average 390,000 b/d, an increase of 10,000 b/d over 2012.

Indonesia's oil supply is expected to decline by 30,000 b/d in 2013 to average 940,000 b/d, while Thailand's supply is forecast to decline by 10,000 b/d to average 330,000 b/d.

On a quarterly basis, Other Asia's oil supply in 2013 is seen to stand at 3.68m b/d, 3.71m b/d, 3.73m b/d and 3.75m b/d, respectively.

Latin America's oil supply is projected to increase by 190,000 b/d over 2012 to average 5.06m b/d in 2013. This is supported by Brazil and Colombia, while other countries' supply within the region is seen to decline.

Colombia's oil supply is expected to experience healthy growth of 70,000 b/d over 2011 to average 1.07m b/d in 2013, while Argentina's supply is seen to decline by 30,000 b/d to average 690,000 b/d.

On a quarterly basis, Latin America's oil supply in 2013 is seen to average 4.96m b/d, 4.99m b/d, 5.11m b/d and 5.18m b/d, respectively.

Brazil's oil supply is expected to average 2.88m b/d in 2013, indicating growth of 140,000 b/d over the previous year.

On a quarterly basis, Brazil's oil supply in 2013 is expected to average 2.79m b/d, 2.81m b/d, 2.92m b/d and 2.98m b/d, respectively.

The Middle East's oil supply is seen to increase by 50,000 b/d in 2013 to average 1.55m b/d. This is supported by anticipated growth in Oman, Bahrain and Yemen, while Syria's oil supply is seen to remain steady next year.

Oman's oil supply is expected to rise by 20,000 b/d in 2013 to average 930,000 b/d, while Bahrain's supply is expected to rise by 10,000 b/d in 2013 to average 230,000 b/d. Yemen's oil supply is estimated to increase by 30,000 b/d in 2013 to average 190,000 b/d.

Syria's oil supply is projected to average 210,000 b/d in 2013, steady from this year. This assumes that a partial return of the shut-down production will begin in the second half of next year. However, the risk to Yemen's and Syria's forecasts remains high, given the ongoing political situation, as well as limited data.

On a quarterly basis, the Middle East's oil supply in 2013 is expected to stand at 1.51m b/d, 1.51m b/d, 1.56m b/d and 1.62m b/d, respectively.

African oil supply in 2013 is forecast to average 2.35m b/d, an increase of 10,000 b/d over 2012. Oil supply from Chad, Congo, Egypt, Gabon and South Africa is expected to remain steady in 2013, with just minor declines of 10,000 b/d each. Oil supply from Ghana, Uganda and Cameroon is forecast to increase. The Sudans' oil supply is seen to increase by 20,000 b/d in 2013.

On a quarterly basis, total oil supply in Africa in 2013 is estimated to average 2.33m b/d, 2.32m b/d, 2.35m b/d and 2.39m b/d, respectively.

The FSU's total oil supply is forecast to average 13.54m b/d in 2013, representing an increase of 170,000 b/d over 2012. The expected growth will come from Russia, Kazakhstan and 'Other FSU'.

On a quarterly basis, total oil supply in the FSU in 2013 is expected to average 13.46m b/d, 13.45m b/d, 13.55m b/d and 13.70m b/d, respectively.

Oil Supply from China is seen to increase by 60,000 b/d in 2013 to average 4.28m b/d.

Other Europe's oil supply should remain steady in 2013 and average 150,000 b/d.

Russian oil supply is projected to increase by 50,000 b/d in 2013 to average 10.39m b/d. However, the risk to the Russia supply forecast is one of the highest among non-OPEC producers and the price environment will be an important factor.

On a quarterly basis, Russian supply in 2013 is seen to average 10.36m b/d, 10.37m b/d, 10.40m b/d and 10.41m b/d, respectively.

Kazakhstan's oil supply is expected to average 1.72m b/d in 2013, indicating an increase of 100,000 b/d over the previous year.

On a quarterly basis, Kazakhstan's oil supply in 2013 is expected to stand at 1.66m b/d, 1.67m b/d, 1.73m b/d and 1.82m b/d, respectively.

Azerbaijan's oil supply is estimated to average 960,000 b/d in 2013, flat from this year.

On a quarterly basis, Azerbaijan's oil supply in 2013 is estimated to average 980,000 b/d, 950,000 b/d, 950,000 b/d and 970,000 b/d respectively.

Oil supply for 'FSU Others' is projected to average 470,000 b/d in 2013, an increase of 20,000 b/d over this year.

China's oil supply is projected to grow by 60,000 b/d in 2013 to average 4.28m b/d.

On a quarterly basis, oil supply in China in 2013 is expected to stand at 4.30m b/d, 4.27m b/d, 4.26m b/d and 4.28m b/d, respectively.

OPEC oil production

Total OPEC crude oil production averaged 31.36m b/d in June, representing a decline of 106,000 b/d, compared with the previous month, according to secondary sources.

OPEC crude oil production in the month, excluding Iraq, averaged 28.38m b/d, a drop of 170,000 b/d over the same period. Iran, and Angola led the crude oil output decrease, while crude oil output from Iraq, Kuwait, and Libya experienced the largest increases in June.

Output of OPEC NGLs and non-conventional oils are estimated to grow by 350,000 b/d in 2012 to average 5.67m b/d. In 2013, production is projected to increase by 240,000 b/d to average 5.91m b/d. The expected growth in 2013 is seen to come mainly from Algeria, Iran, Nigeria, Qatar, Saudi Arabia and the UAE.

Downstream activity

Product market sentiment became bullish in June in the Atlantic Basin, with gasoline

strengthening on the back of tightening supply sentiment, amid additional requirements for the driving season, which, along with the drop in crude prices, caused the margins to increase in that area.

However, in Asia, the margins continued depressed, due to disappointing naphtha demand from the petrochemical sector and rising supplies in the region.

The margin for West Texas Intermediate (WTI) crude on the US Gulf Coast showed a slight increase of 30¢ to stand at around \$26/b in June, similar to the previous month, on the back of the positive developments seen mainly at the top of the barrel, with the gasoline crack strengthening.

Despite the deterioration in domestic demand, the US market continued to be supported by export opportunities to Latin America, with diesel exports hitting a record level during May.

The European product market became bullish, with gasoline gaining momentum over the previous month, as sentiment was supported by higher requirements for summer driving, mainly to the US, where the market tightened on a lack of supplies from the US Gulf Coast market.

On the other hand, middle distillates and fuel oil strengthened, on the back of a tight market brought about by a drop in domestic refinery runs.

Another supportive factor was the marked contraction in crude prices, and the cracks exhibited a sharp improvement across the product slate. This allowed the European refining margin to jump to \$7.5/b, representing a gain of almost \$3 on the previous month, the highest margin seen in several months.

Light distillates continued losing ground in Asia, mainly due to rising supplies, with lower demand exerting pressure on the gasoline and naphtha markets, causing their cracks to fall to the lowest level this year, despite the drop in the Dubai crude price.

On the distillates and fuel oil side, the Asian market remained balanced in a tighter environment, due to the lower inflows and stronger regional demand. However, this positive development could not offset the loss at

the top of the barrel, and Singapore refinery margins showed a slight loss of 40¢ to average \$2.0/b during June.

Despite weak domestic demand, US refineries continued their upward trend in June, with export opportunities continuing to lend support. This, along with weakening crude prices, encouraged refiners to keep run-levels high.

US refinery runs averaged 92.2 per cent of capacity in June, 4.2 per cent higher than in the previous month and hitting a five-year high. This was despite the shutdown of some refineries in the region.

Even at this refining level, distillates and gasoline inventories continued below the five-year average, due to high export levels from the US to markets worldwide, mainly Latin America.

European refiners continued to operate at moderate throughputs, in response to deteriorating margins, maintenance and closures. Refinery runs stood at around 77 per cent in May.

During June, the marked contraction in crude prices had a hand in product market developments and the margins became healthier.

However, later, the trend started to correct itself and, considering that the demand-side fundamentals are still bearish, refiners are expected to keep moderate run-levels, despite the return from maintenance.

The Asian refinery maintenance season continued and there was an unplanned shutdown of units in the region. This, along with the demand growth, continued slowing down developments in the region and caused refineries to reduce runs from the high levels seen in the previous quarter, falling from above 90 per cent to around 86 per cent.

Japanese throughputs remained at around 68 per cent of capacity in June.

US gasoline demand increased by around 80,000 b/d from the previous month to stand at 8.9m b/d in June. However, this level represented a drop of 150,000 b/d from the same month a year earlier.

US gasoline demand picked up during the month to reach 8.9m b/d for the first time this year. This positive performance

coincided with the driving season and allowed gasoline to continue to hover near recent highs.

The market continued to be supported by solid demand from Latin America and the summer driving season.

Middle distillate demand stood at around 3.7m b/d in June, decreasing by 20,000 b/d from the previous month and marking a loss of 230,000 b/d from the same month a year ago.

Middle distillates managed to maintain the margin levels of the previous month, as stronger import requirements from South America offset weakening domestic demand and rising supplies.

Higher diesel requirements from South America, mainly from Chile, Ecuador and Peru, continued to lend support, while distillate stocks in the US continued falling, to hit a low level of 118m b at the end of the month.

Healthy exports to Latin America have increasingly been supporting the diesel market in the US and US distillate exports to Latin America and the Caribbean hit a record level of more than 720,000 b/d in April, according to some sources' estimates based on monthly data from the US Energy Information Administration.

Product market sentiment recovered in Europe, with the tightening Atlantic Basin product market fuelling bullish sentiment to distillates and cracks improving across the barrel. The marked contraction in crude prices also played a role in product market developments.

The European gasoline market gained momentum over last month, as sentiment was supported by higher requirements for summer driving, mainly on strong demand to export cargoes to the US, where the market tightened on a lack of supplies from the US Gulf Coast.

News about unscheduled unit shutdowns at some US Gulf Coast refineries caused the Atlantic Coast to continue increasing transatlantic cargoes from northwest European refineries.

Additionally, despite the weak domestic demand and lower exports to Africa, the European market was also supported by the supply side, due to the closure of a UK refinery.

The naphtha market continued weak in

June, due to the lackluster demand from the petrochemical industry.

Asian refineries increased supplies after finishing maintenance and poor light distillate demand caused cracking margins to lose momentum. This was despite the drop in crude oil prices and the continued strengthening seen in the middle and at the bottom of the barrel.

Oil trade

Preliminary data showed that US crude imports in June 2012 increased by 248,000 b/d to 9.10m b/d, representing a 2.8 per cent increase from the previous month and a 1.5 per cent decrease y-o-y. Year-to-date, crude imports declined slightly by 1.3 per cent.

US product imports for the same month increased by 281,000 b/d to 2.2m b/d, 14.3 per cent higher m-o-m, yet 12 per cent lower than in the previous year. Product imports in a year-to-date comparison saw a larger decline than crude, estimated at 23 per cent.

US product exports saw a minor increase of 2.4 per cent, totaling 2.9m b/d. Y-o-y, they showed an increase of 12.6 per cent.

Accordingly, net US oil imports increased in June by 460,000 b/d to 8.4m b/d, around 5.8 per cent higher m-o-m, but 8.4 per cent lower y-o-y.

Japan's crude oil imports in May fell by 9.1 per cent to 3.6m b/d m-o-m. Crude imports increased by 16 per cent for the same month.

Product imports declined by 50,000 b/d, or 7.7 per cent, from levels seen in April 2012. However, a 19.6 per cent increase has been registered in this sector compared with the previous year.

Product exports for the same period increased by five per cent m-o-m to average 477,000 b/d and increased by 6.2 per cent y-o-y.

Consequently, Japan's net oil imports decreased by 432,000 b/d, or 10.5 per cent, from a month earlier to reach 3.7m b/d in May. Nevertheless, annual figures have shown an increase of 564,000 b/d.

China's crude oil imports reached a record

level in May, increasing by 585,000 b/d, or 10.8 per cent, from the previous month to a total of 6.0m b/d. Y-o-y, Chinese imports have grown by 18.2 per cent, an increase of 929,000 b/d. Year-to-date, China crude oil imports increased by 10.4 per cent.

The country's crude oil exports rebounded in May after the previous month's decline, averaging 42,000 b/d, while compared with figures seen in May last year, total crude exports increased by 30,000 b/d.

Product imports increased by 11.4 per cent in May to reach a level of 853,000 b/d m-o-m. Y-o-y, a decline of 224,000 b/d, or 20.8 per cent, was registered.

China's product exports saw an increase of 25.1 per cent over the previous month to average 527,000 b/d, while y-o-y they decreased by 26.2 per cent.

China's net oil imports increased by 537,000 b/d to average 6.31m b/d, or 9.3 per cent, in May 2012, compared with a month before. In an annual comparison, they gained 862,000 b/d, or 15.8 per cent.

India's crude oil imports declined in May by 122,000 b/d, or 3.4 per cent, over the previous month to 3.5m b/d. However, they achieved a gain of 5.9 per cent over the previous year.

While product imports fell by 64,000 b/d, or 19 per cent, m-o-m, they increased by 22,000 b/d, or 8.7 per cent, y-o-y to average 272,000 b/d.

India's product exports declined by 48,000 b/d, or 4.6 per cent, m-o-m, while the decrease was 29.7 per cent y-o-y.

This resulted in a decline in India's net oil imports by 138,000 b/d, or 4.8 per cent, from the previous month. In comparison to a year ago, they increased by 30.2 per cent.

Total FSU crude exports dropped by 463,000 b/d to average 6.4m b/d, after reaching a record level in April 2012. Russian pipeline crude exports dropped by 147,000 b/d, or 3.3 per cent, m-o-m to average 4.4m b/d.

Total FSU products exports declined in May by 6.4 per cent, or 619,000 b/d, to stand at 9.1m b/d.

Stock movements

US total commercial oil stocks rose for a second consecutive month in June, increasing by 10.8m b to end the month at 1,098.1m b, the highest level since August 2011.

Thus, stocks stood at 17.0m b, or 1.6 per cent, above the level of a year ago, while the surplus on the five-year average was 31.5m b, or three per cent.

The build was attributed mainly to products, as they increased by 12.5m b, while crude abated the build, declining by 1.7m b.

In June, US commercial crude oil stocks fell by 1.7m b, after five consecutive months of increases, to end the month at 382.9m b. However, despite this, they remained 24.4m b, or 6.8 per cent, above the same time last year, representing a surplus of 39.3m b, or 11.4 per cent, on the five-year average.

The build came from strong crude oil refinery inputs, increasing by nearly 460,000 b/d to average 15.6m b/d. This level is also higher, by 450,000 b/d, than the same time a year ago.

In June, US refineries operated at 92.1 per cent, which was 0.2 per cent higher than in the previous month and 4.1 per cent above the same month last year.

An increase in crude oil imports in June from the previous month, averaging 9.1m b/d, limited the draw on crude oil stocks.

On the products side, the picture was mixed. Other unfinished products, propylene, gasoline and residual fuel saw builds, while distillates and jet fuel oil experienced drops. Gasoline stocks reversed the huge stock-draws of the past four months and increased by 1.5m b to stand at 205.0m b.

Despite this build, they were 10.2m b, or 4.7 per cent, below last year's level and 7.1m b, or 3.3 per cent, below the five-year average.

The build in gasoline reflected mainly a healthy level of exports, as both apparent demand and production went up. Indeed, gasoline demand for June, based on weekly data, rose by around 123,000 b/d to an average of 8.9m b/d.

Distillate stocks continued to fall, following six consecutive months of decline, and they have now lost more than 32.0m b since the beginning of the year. At 120.0m b, they were 25.9m b, or 18 per cent, below the same period last year and 24.2m b, or 17 per cent, below the seasonal norm.

This drop came mainly on the back of stronger exports, averaging 1.1m b/d. Healthy demand also contributed to the decline in distillate stocks, as higher production limited the decrease.

Distillate demand exceeded 3.8m b/d for the last two weeks of June, while overall output rose to 4.7m b/d, alleviating some pressure on the distillate market.

Residual oil stocks reversed the downward trend of the last two months and rose by 4.0m b to end June at 35.0m b/d, while jet fuel oil stocks fell by 2.0m b from the previous month to stand at 37.8m b.

In Japan in May, commercial oil stocks in rose for the third consecutive month, by 6.4m b to stand at 179.1m b, the highest level since May 2011.

With this build, they reduced the deficit with a year ago to 0.7 per cent from 4.6 per cent a month earlier. This build also helped switch the deficit with the five-year average to a surplus of 0.4 per cent.

Japanese commercial crude oil stocks grew further in May, increasing by 4.0m b to stand at 107.5m b. This build came mainly from lower crude throughput, which declined by 377,000 b/d, or 10.7 per cent, to an average of 3.2m b/d.

Refineries in Japan were running at 70.4 per cent, which was 8.4 per cent lower than in the previous month, but much higher – 7.6 per cent – than the same period last year.

It should be highlighted that direct crude burning in power plants continued to spike, averaging 308,000 b/d, more than the level in May 2011.

Japan's total product inventories rose for the second consecutive month, by 2.4m b, to end May at 71.6m b, the highest level since November.

With the exception of distillates, which saw a build, all products remained almost unchanged. Distillate stocks rose for the second month running, by 2.5m b, to end May at 29.7m b, the highest level since the beginning this year.

All components of distillates experienced a build, with the biggest attributed to kerosene, which increased by 16.6 per cent, followed by jet fuel and gasoil, with rises of 5.9 per cent and 3.8 per cent, respectively. Gasoline stocks remained unchanged in May, ending the month at 14.1m b.

Residual fuel oil stocks saw a minor drop in May, reversing the build of last month to stand at 16.8m b, while naphtha inventories remained unchanged in May from a month earlier and ended the month at 10.9m b.

In Singapore, at the end of May, product stocks fell for the third consecutive month, by 500,000 b, to end the month at 38.0m b.

Within products, the picture was mixed; middle and light distillates saw a drop, while fuel oil stocks increased.

At 8.9m b, light distillate stocks ended May 1.5m b lower than in the previous month, while middle distillate stocks finished May at 8.8m b, which was 100,000 b lower than the previous month, standing at 3.8m b.

Fuel oil stocks reversed the stock-draw of the previous month and rose by 1.0m b, ending May at 20.3m b.

Product stocks in the Amsterdam, Rotterdam, Antwerp (ARA) area at the end of May fell slightly by 200,000 b, ending the month at 31.0m b, the lowest level since the end of last year.

Within products, gasoline, naphtha and fuel oil saw builds, while gasoil and jet fuel oil witnessed declines. Gasoline stocks rose by 500,000 b to 5.8m b, naphtha inventories saw a build of 300,000 b, ending May at 1.2m b, fuel oil stocks increased by 900,000 b in May to stand at 4.7m b, gasoil stocks fell for the second consecutive month, by 900,000 b, ending May at 16.9m b, the lowest level since the end of last year, and jet fuel stocks fell by 900,000 b to stand at 2.3m b.



Table A: World crude oil demand/supply balance															m b/d	
World demand	2007	2008	2009	2010	2011	1Q12	2Q12	3Q12	4Q12	2012	1Q13	2Q13	3Q13	4Q13	2013	
OECD	49.3	47.6	45.6	46.2	45.6	45.6	44.5	45.9	45.7	45.4	45.7	44.2	45.6	45.6	45.3	
North America	25.5	24.2	23.3	23.8	23.5	23.1	23.2	23.7	23.5	23.4	23.2	23.1	23.6	23.6	23.4	
Western Europe	15.5	15.4	14.7	14.6	14.3	13.7	13.7	14.4	13.9	13.9	13.5	13.5	14.1	13.6	13.7	
Pacific	8.4	8.0	7.7	7.8	7.9	8.8	7.6	7.8	8.4	8.1	8.9	7.6	7.9	8.4	8.2	
Developing countries	24.8	25.6	26.2	27.0	27.8	27.8	28.2	28.7	28.6	28.3	28.3	28.7	29.2	29.1	28.8	
FSU	4.0	4.1	4.0	4.2	4.3	4.2	4.1	4.5	4.8	4.4	4.3	4.2	4.6	4.9	4.5	
Other Europe	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.8	0.7	
China	7.6	8.0	8.3	9.0	9.4	9.5	10.0	9.8	10.0	9.8	9.8	10.4	10.2	10.3	10.2	
(a) Total world demand	86.5	86.1	84.8	87.0	87.8	87.8	87.5	89.6	89.8	88.7	88.8	88.2	90.4	90.6	89.5	
Non-OPEC supply																
OECD	19.8	19.3	19.4	19.5	20.1	21.0	20.8	20.6	20.8	20.8	21.0	21.0	21.0	21.5	21.1	
North America	14.3	13.9	14.4	15.0	15.5	16.4	16.4	16.3	16.4	16.4	16.6	16.7	16.9	17.2	16.8	
Western Europe	4.9	4.7	4.4	4.1	4.1	4.1	3.9	3.7	3.9	3.9	3.9	3.7	3.6	3.8	3.8	
Pacific	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Developing countries	12.2	12.4	12.7	12.6	12.6	12.4	12.2	12.4	12.5	12.4	12.5	12.5	12.7	12.9	12.7	
FSU	12.6	13.0	13.2	13.3	13.3	13.4	13.3	13.4	13.5	13.4	13.5	13.5	13.5	13.7	13.5	
Other Europe	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
China	3.8	3.8	4.1	4.1	4.1	4.2	4.2	4.2	4.3	4.2	4.3	4.3	4.3	4.3	4.3	
Processing gains	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
Total non-OPEC supply	50.3	51.1	52.3	52.4	52.4	53.2	52.8	52.9	53.4	53.1	53.6	53.6	53.9	54.8	54.0	
OPEC NGLs and non-conventionals	4.1	4.3	5.0	5.3	5.3	5.5	5.6	5.7	5.9	5.7	5.9	5.9	5.9	6.0	5.9	
(b) Total non-OPEC supply and OPEC NGLs	54.4	55.4	57.3	57.7	57.7	58.7	58.4	58.6	59.2	58.7	59.5	59.5	59.9	60.7	59.9	
OPEC crude supply and balance																
OPEC crude oil production¹	30.2	31.3	28.8	29.2	29.8	31.2	31.5									
Total supply	84.6	86.7	86.0	86.9	87.5	89.9	89.9									
Balance²	-1.9	0.6	1.3	-0.1	-0.3	2.1	2.4									
Stocks																
OECD closing stock level^{m b}																
Commercial	2554	2679	2641	2670	2601	2649										
SPR	1524	1527	1564	1561	1532	1531										
Total	4079	4206	4205	4230	4133	4180										
Oil-on-water	948	969	919	871	825	787										
Days of forward consumption in OECD																
Commercial onland stocks	54	59	57	58	57	60										
SPR	32	33	34	34	34	34										
Total	86	92	91	93	91	94										
Memo items																
FSU net exports	8.6	8.8	9.2	9.1	9.0	9.1	9.2	8.9	8.7	9.0	9.1	9.3	9.0	8.8	9.1	
[(a) – (b)]	32.1	30.6	27.5	29.3	30.1	29.1	29.1	31.0	30.6	29.9	29.3	28.7	30.5	29.9	29.6	

1. Secondary sources.

2. Stock change and miscellaneous.

Note: Totals may not add up due to independent rounding.

Table A above, prepared by the Secretariat's Petroleum Studies Department, shows OPEC's current forecast of world supply and demand for oil and natural gas liquids.

The monthly evolution of spot prices for selected OPEC and non-OPEC crudes is presented in **Tables 1 and 2** on page 155, while **Graphs 1 and 2** on page 156 show the evolution on a weekly basis. **Tables 3 to 8** and the corresponding graphs on pages 157–158 show the evolution of monthly average spot prices for important products in six major markets. (Data for Tables 1–8 is provided courtesy of Platt's Energy Services.)

Table 1: OPEC Reference Basket crude oil prices \$/b

Crude/Member Country	2011					2012					Weeks 22-26/12 (week ending)									
	June	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jun 1	Jun 8	Jun 15	Jun 22	Jun 29		
Arab Light – Saudi Arabia	109.37	111.61	106.43	107.72	106.40	110.59	107.96	112.82	118.01	123.43	118.94	108.48	94.51	102.77	97.10	96.21	92.63	91.41		
Basrah Light – Iraq	106.65	109.87	105.07	106.68	105.00	108.47	106.06	110.21	116.21	121.96	116.26	105.94	92.02	99.97	95.14	93.60	89.90	88.78		
Bonny Light – Nigeria	117.27	119.69	112.41	115.63	113.09	114.21	110.71	113.08	122.36	127.98	122.36	112.87	97.19	106.22	101.08	99.04	94.51	93.46		
Es Sider – SP Libyan AJ	114.84	117.69	111.26	113.93	110.24	111.46	108.66	111.28	120.26	126.03	120.71	111.27	96.04	104.71	99.93	97.89	93.36	92.31		
Girassol – Angola	114.07	116.63	110.60	111.59	110.26	111.73	109.07	113.01	120.51	126.30	121.32	111.20	96.44	104.66	99.84	98.44	93.95	92.97		
Iran Heavy – IR Iran	107.39	110.34	104.90	105.54	104.83	109.20	106.83	111.77	116.51	122.46	117.78	107.06	93.09	101.51	95.40	95.06	91.22	89.94		
Kuwait Export – Kuwait	106.65	109.33	104.51	105.16	104.09	109.46	107.06	112.00	116.79	122.32	117.53	107.55	93.32	102.03	95.49	95.20	91.56	90.26		
Marine – Qatar	107.83	110.34	105.14	106.46	104.68	109.14	107.36	110.65	116.99	122.80	117.39	107.79	94.86	102.88	96.89	96.83	93.12	91.74		
Merey* – Venezuela	99.92	103.26	99.81	99.12	99.24	105.05	101.44	107.77	109.26	112.07	108.62	99.97	87.52	94.94	88.53	89.72	86.39	84.81		
Murban – UAE	112.06	114.33	108.92	109.57	107.51	111.92	109.49	113.03	119.31	125.61	120.44	110.58	96.76	105.06	98.63	98.77	95.13	93.67		
Oriente – Ecuador	98.87	103.46	97.91	103.82	103.69	105.75	100.99	104.11	112.44	118.26	113.86	102.25	89.22	95.94	92.70	90.85	87.26	85.61		
Saharan Blend – Algeria	115.74	117.29	111.16	115.03	112.74	112.41	108.56	111.43	120.36	126.13	120.81	110.27	94.69	103.64	98.58	96.54	92.01	90.96		
OPEC Reference Basket	109.04	111.62	106.32	107.61	106.29	110.08	107.34	111.76	117.48	122.97	118.18	108.07	93.98	102.28	96.63	95.83	92.01	90.77		

Table 2: Selected OPEC and non-OPEC spot crude oil prices \$/b

Crude/Member Country	2011					2012					Weeks 22-26/12 (week ending)									
	June	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jun 1	Jun 8	Jun 15	Jun 22	Jun 29		
Minas – Indonesia ¹	116.28	121.71	117.03	113.32	110.01	117.85	114.35	120.41	126.31	133.85	130.15	120.21	104.83	114.01	108.56	107.89	101.70	100.29		
Arab Heavy – Saudi Arabia	104.34	107.55	103.23	103.18	102.40	108.67	106.61	111.73	116.21	121.84	116.62	106.89	92.67	101.62	94.49	94.71	91.02	89.63		
Brega – SP Libyan AJ	115.94	118.79	112.36	115.03	111.34	112.56	109.76	111.18	119.86	125.73	120.11	110.57	95.49	104.04	99.38	97.34	92.81	91.76		
Brent – North Sea	114.04	116.89	110.46	113.13	109.44	110.66	107.86	110.58	119.56	125.33	119.71	110.27	95.19	103.74	99.08	97.04	92.51	91.46		
Dubai – UAE	107.77	109.99	104.96	106.31	104.13	108.94	106.43	109.86	116.17	122.47	117.30	107.71	94.44	102.62	96.25	96.47	92.81	91.43		
Ekofisk – North Sea	116.01	118.49	112.22	114.27	111.42	111.76	109.01	112.25	121.02	126.48	120.59	111.24	95.96	105.12	100.49	98.30	93.54	92.52		
Iran Light – IR Iran	110.45	113.78	107.28	108.47	107.12	109.42	107.06	109.76	117.05	122.83	117.35	107.69	93.35	101.34	96.97	95.52	91.40	90.41		
Isthmus – Mexico	106.30	108.62	101.06	104.05	105.18	111.54	110.27	110.02	114.42	120.46	116.04	107.20	93.16	100.01	95.72	94.23	91.72	90.76		
Oman – Oman	107.90	110.41	105.30	106.65	104.96	109.30	107.28	110.91	117.15	122.92	117.44	107.76	94.49	102.69	96.34	96.55	92.83	91.43		
Suez Mix – Egypt	108.81	112.08	106.33	107.56	104.96	107.73	104.15	106.91	115.60	119.34	114.58	106.21	90.46	99.25	94.28	92.39	88.36	87.68		
Tia Juana Light ² – Venez.	104.28	106.66	99.24	102.17	103.40	109.64	108.28	108.04	112.36	118.41	114.07	105.16	91.48	98.13	94.00	92.53	90.06	89.12		
Urals – Russia	111.68	114.90	109.25	110.39	108.10	110.54	107.31	109.91	118.50	122.41	117.69	109.21	93.81	102.14	97.03	95.48	91.39	90.73		
WTI – North America	96.21	97.14	86.30	85.60	86.45	97.11	98.58	100.30	102.35	106.31	103.35	94.45	82.33	87.78	84.41	83.25	81.15	80.32		

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.

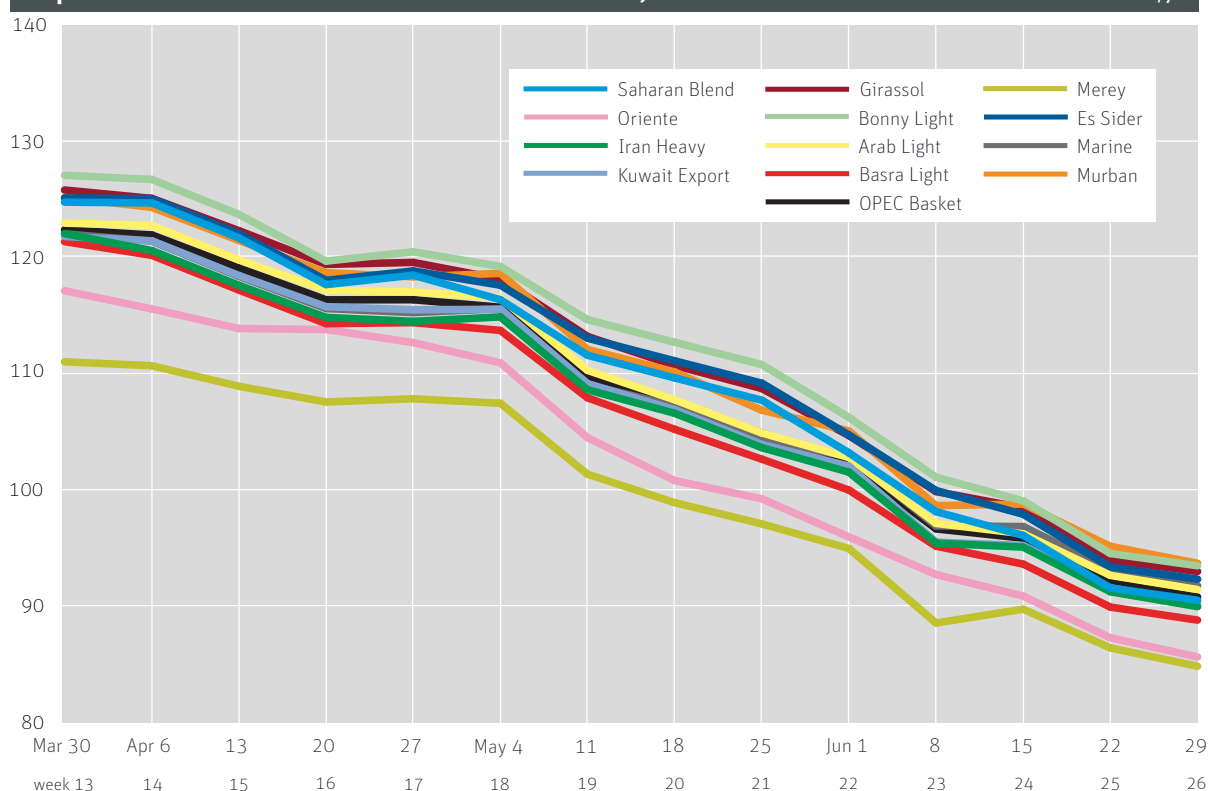
2. Tia Juana Light spot price = (TJL netback/Isthmus netback) x Isthmus spot price.

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.

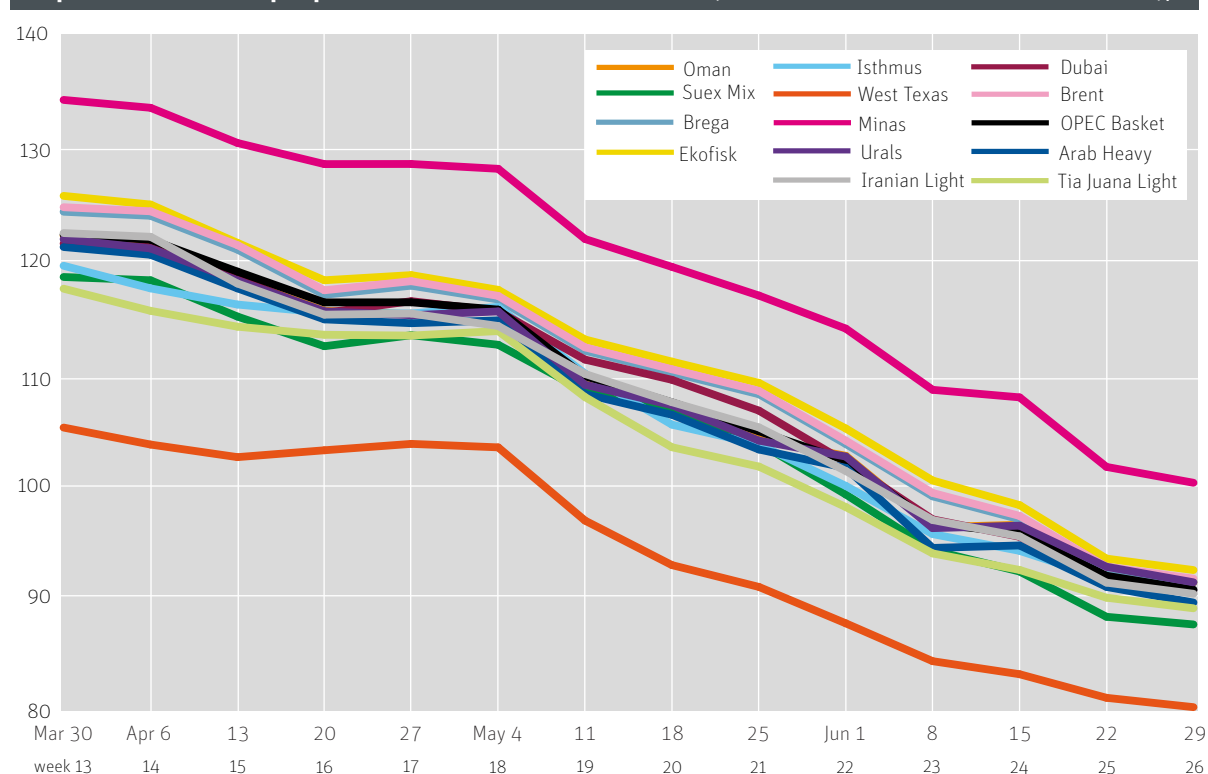
Graph 1: Evolution of the OPEC Reference Basket crudes, 2012

\$/b



Graph 2: Evolution of spot prices for selected non-OPEC crudes, 2012

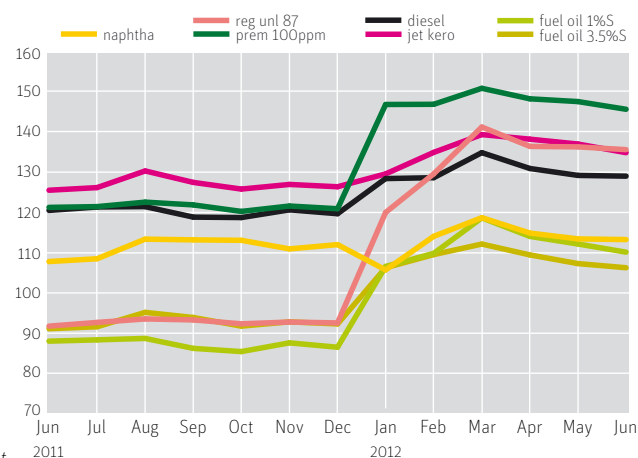
\$/b



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 Meray 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

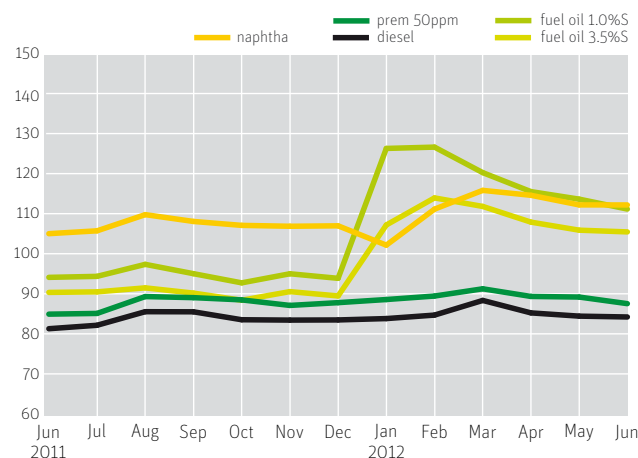
		naphtha	regular gasoline unleaded	premium gasoline 50ppm	diesel ultra light	jet kero	fuel oil 1 per centS	fuel oil 3.5 per centS
2011	June	103.26	122.89	142.97	127.63	130.51	104.58	98.87
	July	108.51	129.13	144.91	131.17	133.69	107.87	102.35
	August	104.01	123.58	140.81	125.79	127.58	101.09	98.83
	September	104.01	123.64	141.87	126.27	126.83	100.41	99.27
	October	97.59	117.08	141.74	129.10	127.57	100.41	99.30
	November	95.62	112.81	147.62	131.75	131.30	103.47	100.69
	December	96.97	112.46	141.25	124.00	124.89	102.11	97.12
2012	January	105.24	119.63	146.65	128.11	129.31	106.12	105.81
	February	113.65	129.29	147.70	126.21	134.66	112.44	109.08
	March	118.32	141.01	150.70	134.60	139.12	118.27	111.72
	April	114.47	136.16	148.07	130.63	137.97	113.63	109.00
	May	113.01	136.04	147.38	128.90	136.75	111.73	106.83
	June	112.84	135.35	145.45	128.71	134.59	109.69	105.79



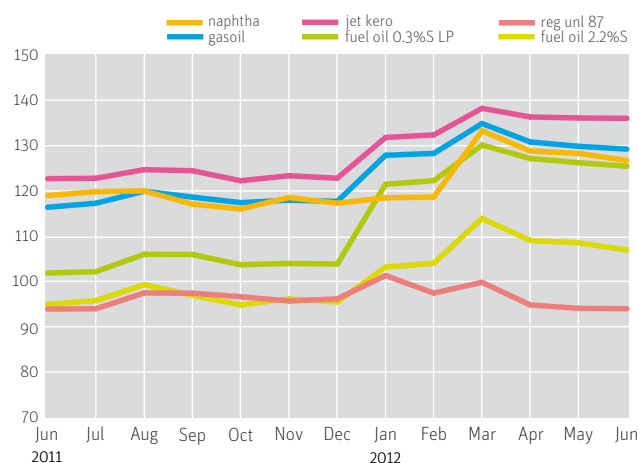
Note: Prices of premium gasoline and diesel from January 1, 2008, are with 10 ppm sulphur content.

Table and Graph 4: South European market — spot cargoes, fob Italy
\$/b

		naphtha	premium gasoline 50ppm	diesel ultra light	fuel oil 1 per centS	fuel oil 3.5 per centS
2011	June	101.18	84.23	81.28	105.06	97.87
	July	106.54	84.41	82.14	108.16	101.55
	August	102.08	88.62	85.53	101.24	97.69
	September	102.04	88.35	85.50	111.51	99.63
	October	95.47	87.79	83.52	115.30	100.19
	November	93.51	86.41	83.43	119.66	103.15
	December	94.06	87.10	83.47	112.24	102.06
2012	January	102.08	87.88	83.81	116.29	107.13
	February	111.13	88.75	84.68	115.17	108.85
	March	115.82	90.56	88.34	120.25	111.81
	April	114.59	88.65	85.23	115.51	107.89
	May	112.19	88.50	84.42	113.63	105.88
	June	112.18	86.85	84.21	111.15	105.45


Table and Graph 5: US East Coast market — spot cargoes, New York
\$/b, duties and fees included

		naphtha	regular gasoline unleaded 87	gasoil	jet kero	fuel oil 0.3 per centS	fuel oil 2.2 per centS
2011	June	93.90	118.83	124.10	128.57	119.48	101.18
	July	93.96	126.99	128.47	132.28	123.81	102.17
	August	97.45	119.58	123.15	127.25	114.16	97.80
	September	97.40	116.67	122.21	125.13	113.68	98.26
	October	96.62	115.80	123.52	125.48	117.07	99.30
	November	95.67	110.87	128.14	129.71	118.84	100.94
	December	96.15	110.58	120.86	122.78	113.50	96.31
2012	January	96.59	118.47	127.88	131.82	121.47	103.16
	February	97.42	127.49	134.42	136.97	123.49	110.21
	March	99.79	133.29	134.89	138.26	130.15	113.94
	April	94.80	128.82	130.82	136.35	127.16	109.04
	May	94.06	128.32	129.86	136.12	126.24	108.53
	June	93.97	126.73	129.25	136.05	125.46	106.96



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 centS	fuel oil 2.8 per centS
2011	June	101.92	76.07	129.32	94.18	93.13
	July	107.88	76.88	132.92	95.17	94.12
	August	102.33	78.98	127.84	90.80	89.75
	September	99.67	77.25	125.50	91.26	90.20
	October	99.12	76.12	125.80	92.24	91.19
	November	94.19	77.10	129.69	93.92	92.61
	December	96.65	76.61	121.94	89.31	87.86
2012	January	105.30	77.10	131.13	96.27	94.62
	February	112.09	72.09	136.24	103.16	101.52
	March	116.41	72.79	138.38	106.94	105.16
	April	115.28	71.94	135.75	102.52	103.23
	May	113.98	70.98	134.05	100.59	102.38
	June	112.80	70.02	131.90	99.88	100.58

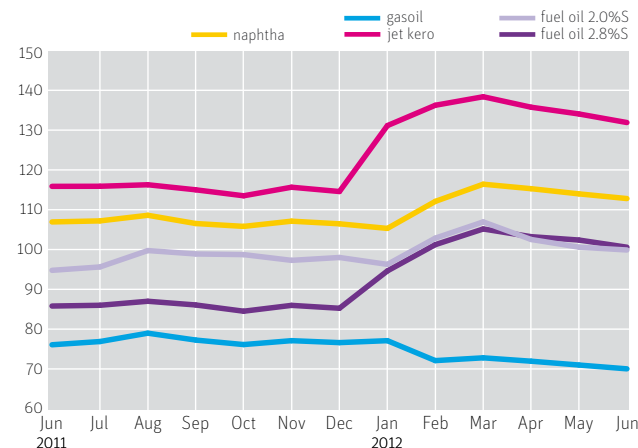


Table and Graph 7: Singapore market — spot cargoes, fob

\$/b

		naphtha	premium gasoline unl 95	premium gasoline unl 92	diesel ultra light	jet kero	fuel oil 180 Cst	fuel oil 380 Cst
2011	June	101.90	120.33	117.76	127.73	126.89	103.62	101.33
	July	105.97	126.01	123.27	129.83	129.24	107.26	103.78
	August	103.00	122.85	119.75	125.29	124.89	105.51	101.08
	September	103.49	124.36	122.06	124.38	123.53	105.42	101.23
	October	96.19	121.93	119.90	122.89	123.25	105.82	102.08
	November	95.25	112.86	111.17	129.39	127.99	110.76	105.89
	December	98.61	113.86	111.51	125.12	122.87	105.72	102.52
2012	January	104.82	123.99	120.80	129.98	126.70	114.37	110.79
	February	114.29	130.70	128.63	134.55	132.46	115.93	112.87
	March	119.33	136.64	134.48	138.08	136.18	117.85	114.99
	April	115.70	135.35	130.22	134.55	132.98	116.60	110.57
	May	115.05	135.02	129.19	134.00	130.48	115.37	110.56
	June	113.18	134.45	127.86	131.73	129.29	115.14	110.12

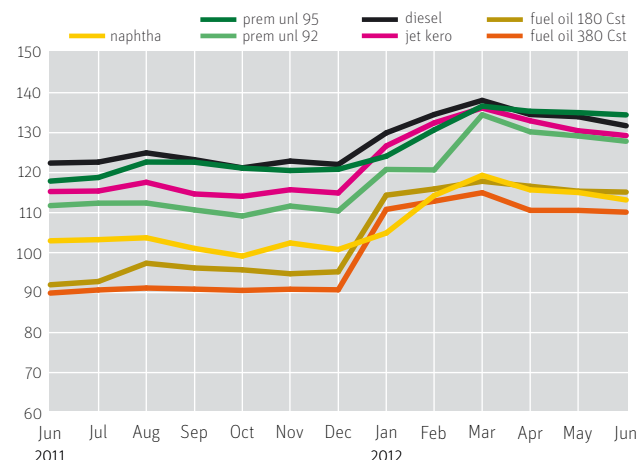
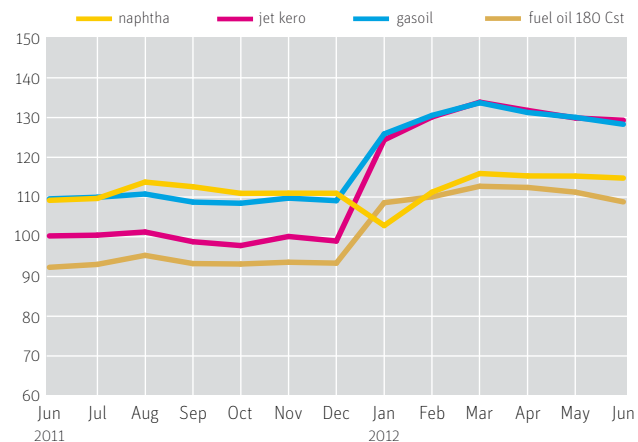


Table and Graph 8: Middle East Gulf market — spot cargoes, fob

\$/b

		naphtha	gasoil	jet kero	fuel oil 180 Cst
2011	June	100.74	123.44	124.53	98.88
	July	104.65	125.94	126.89	100.74
	August	101.06	120.24	122.28	98.27
	September	101.31	120.02	120.98	98.84
	October	94.85	118.99	121.06	99.33
	November	94.18	125.59	125.77	103.97
	December	96.76	121.12	120.59	100.74
2012	January	102.73	125.92	124.40	108.57
	February	111.22	130.54	130.15	110.05
	March	115.92	133.72	133.87	112.71
	April	115.31	131.27	131.80	112.41
	May	115.27	130.05	129.89	111.22
	June	114.76	128.31	129.32	108.78



Source: Platts. Prices are average of available days.

Forthcoming events

Offshore northern seas (ONS), August 28–31, 2012, Stavanger, Norway. Details: ONS, PO Box 175, NO-4001 Stavanger, Norway. Tel: +47 51 84 90 40; fax: +47 51 55 10 15; e-mail: info@ons.no; www.ons.no.

Fundamentals of oil and gas agreements, August 29, 2012, London, UK. Details: IBC Global Conferences, The Bookings Department, Informa UK Ltd, PO Box 406, West Byfleet KT14 6WL UK. Tel: +44 207 017 55 18; fax: +44 207 017 47 15; e-mail: energycustserv@informa.com; website: www.ibcenergy.com.

Bunkering disputes, August 29–30, 2012, Singapore. Details: Conference Connection Administrators Pte Ltd, 105 Cecil Street #07-02, The Octagon, 069534 Singapore. Tel: +65 6222 0230; fax: +65 6222 0121; e-mail: info@cconnection.org; website: www.cconnection.org.

Power industry India, August 30–31, 2012, New Delhi, India. 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: oil-gas@ite-exhibitions.com; website: ite-exhibitions.com.

Improving the healthcare of oil and gas fields, September 2–6, 2012, Dubai, UAE. Details: Society of Petroleum Engineers, Dubai Knowledge Village, Block 17, Offices S07-S09, PO Box 502217, Dubai, UAE. Tel: +971 4 390 3540; fax: +971 4 366 4648; e-mail: spedub@spe.org; website: www.spe.org.

Mathematical methods in fluid dynamics and simulation of giant oil and gas reservoirs, September 3–5, 2012, Istanbul, Turkey. Details: Society of Petroleum Engineers, Dubai Knowledge Village, Block 17, Offices S07-S09, PO Box 502217, Dubai, UAE. Tel: +971 4 390 3540; fax: +971 4 366 4648; e-mail: spedub@spe.org; website: www.spe.org.

Production sharing contracts and international petroleum fiscal systems module II, September 3–7, 2012, Singapore. Details: Conference Connection Administrators Pte Ltd, 105 Cecil Street #07-02, The Octagon, 069534 Singapore. Tel: +65 6222 0230; fax: +65 6222 0121; e-mail: info@cconnection.org; website: www.cconnection.org.

SPE/SEG joint applied technology workshop: giant fields monitoring – Are we doing it right? September 4–5, 2012, Dubai, UAE. Details: Society of Petroleum Engineers, Dubai Knowledge Village, Block 17, Offices S07-S09, PO Box 502217, Dubai, UAE. Tel: +971 4 390 3540; fax: +971 4 366 4648; e-mail: spedub@spe.org; website: www.spe.org.

10th International exhibition of technologies for distribution and effective use of gas, September 4–6, 2012, 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: oil-gas@ite-exhibitions.com; website: ite-exhibitions.com.

Pacific petroleum insiders, September 6–7, 2012, Singapore. Details: Conference Connection Administrators Pte Ltd, 105 Cecil Street #07-02, The Octagon, 069534 Singapore. Tel: +65 6222 0230; fax: +65 6222 0121; e-mail: info@cconnection.org; website: www.cconnection.org.

46th PetroArabian – PetroAfricanus dinner, September 10, 2012, Geneva, Switzerland. Details: Global Pacific Partners, Suite 7, 4 Montpelier Street, Knightsbridge, London SW7 1EE, UK. Tel: +44 207 589 7804; fax: +44 207 589 7814; e-mail: babette@glopac.com; website: www.petro21.com.

6th Annual European gas supply and infrastructure, September 10–11, 2012, Vienna, Austria. Details: Platts, 20 Canada Square, Canary Wharf, London E14 5LH, UK. Tel: +44 207 1766142; fax: +44 207 176 8512; e-mail: cynthia_rugg@platts.com; website: www.events.platts.com.

9th MidEast-North Africa-Mediterranean upstream conference, September 10–11, 2012, Geneva, Switzerland. Details: Global Pacific Partners, Suite 7, 4 Montpelier Street, Knightsbridge, London SW7 1EE, UK. Tel: +44 207 589 7804; fax: +44 207 589 7814; e-mail: babette@glopac.com; website: www.petro21.com.

Asia Pacific summit, September 10–12, 2012, Singapore. 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.thecwcgroup.com.

Well and reservoir management: oil and gas field monitoring, September 10–12, 2012, Doha, Qatar. Details: Society of Petroleum Engineers, Dubai Knowledge Village, Block 17, Offices S07-S09, PO Box 502217, Dubai, UAE. Tel: +971 4 390 3540; fax: +971 4 366 4648; e-mail: spedub@spe.org; website: www.spe.org.

Oil and gas project and operations management, September 11–13, 2012, 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.uk.

Smart power Europe, September 11–13, 2012, Prague, Czech Republic. Details: IBC Global Conferences, The Bookings Department, Informa UK Ltd, PO Box 406, West Byfleet KT14 6WL UK. Tel: +44 207 017 55 18; fax: +44 207 017 47 15; e-mail: energycustserv@informa.com; website: www.ibcenergy.com.

Asia refining congress, September 17, 2012, Singapore. 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; www.terrapinn.com.

Energy from waste, September 17–18, 2012, 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.

The oil and gas MBA, September 24, 2012, London, UK. Details: IBC Global Conferences, The Bookings Department, Informa UK Ltd, PO Box 406, West Byfleet KT14 6WL UK. Tel: +44 207 017 55 18; fax: +44 207 017 47 15; e-mail: energycustserv@informa.com; website: www.ibcenergy.com.



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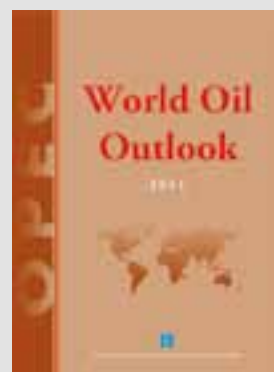
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