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Membership and aims

OPEC is a permanent, intergovernmental Organization, established in Baghdad, September 10–14, 1960, by IR Iran, Iraq, Kuwait, Saudi Arabia and Venezuela. Its objective is to coordinate and unify petroleum policies among 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 the five Founding Members and six other Full Members: Qatar (joined in 1961); Indonesia (1962); SP Libyan AJ (1962); United Arab Emirates (Abu Dhabi, 1967); Algeria (1969); and Nigeria (1971). Ecuador joined the Organization in 1973 and left in 1992; Gabon joined in 1975 and left in 1995.

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This month's cover ...

shows the Eleme Petrochemicals Company Ltd plant in Port Harcourt, Nigeria (see Profile of Nigeria beginning on page 8).

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OPEC bulletin

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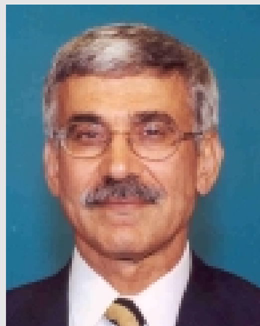
NOTICEBOARD

OPEC appoints new Director of Research Division

OPEC has appointed Dr Adnan Shihab-Eldin (pictured) of Kuwait as the new Director of its Research Division. Dr Shihab-Eldin, who takes over from Dr Shokri Ghanem, was born in 1943 and holds a BSc in electrical engineering, as well as an MSc and a PhD in nuclear engineering, all from the University of California, Berkeley.



Prior to joining OPEC, Dr Shihab-Eldin held the post of Director of the Division for Africa and East Asia and the Pacific at the Vienna-based International Atomic Energy Agency from March 1999 to August this year. Before that, he worked for UNESCO for most of the 1990s, as Director of the Regional Office for Science and Technology and as the organization's Representative in Egypt, Sudan and Yemen.

He has taught and directed research at a number of universities and research centres in Kuwait, the USA and Europe. He was a planning engineer with the Kuwait National Petroleum Company from 1965-70, then Vice-Rector for Academic Affairs at Kuwait University, which he joined in 1970, from 1976-80, and Director General of the Kuwait Institute for Scientific Research from 1976–86.

Dr Shihab-Eldin is a member of numerous professional societies and has served on the board of directors of more than 30 companies, foundations and advisory committees. He has published more than 100 scientific papers, articles and reports, lectured or contributed invited talks at numerous seminars, conferences and international meetings, as well as co-authoring five books on subjects as diverse as new energy technologies, environmental issues, nuclear science and engineering, and science and technology in developing countries. He is married with two daughters and a son.

Forthcoming events

Berlin, Germany, **October 24–25, 2001**, *Competing for Household Customers in the Power Market.* Details: Monica Gahlin, Energyforum.net. Tel: +46 8 20 90 95; fax: +46 8 20 90 73; e-mail: info@energyforum.net; www.energyforum.net/kunden.

London, UK, **October 29–30, 2001**, *22nd Oil & Money Conference: Beyond Boom and Bust: Coping with Imbalances in Oil and Gas Markets.* Details: Andrew James, The Conference Office, International Herald Tribune, 40 Marsh Wall, London E14 9TP, UK. Tel: +44 (0)20 7510 5706; fax: +44 (0)20 7987 3463; e-mail: ajames@iht.com.

Manama, Bahrain, **October 29–31, 2001**, *Petrotech 2001, 3rd Middle East Refining and Petrochemicals Exhibition and Conference & Exhibition.* Details: Ms Heather Edkins, Project Manager, Overseas Exhibition Services Ltd, 11 Manchester Square, London, W1M 5AB, UK. Tel: +44 (0)20 7862 2073; fax: +44 (0)20 862 2078; e-mail: heathere@montnet.com; Web site: www.aeminfo.com.bh.

Casablanca, Morocco, **November 1–2, 2001**, *First CEN SAD Energy and Natural Resources Investment Summit.* Details: CWC Associates, 3 Tyers Gate, London SE1 3HX, UK. Tel: +44 (0)20 7089 4200; fax: +44 (0)20 7089 4201; e-mail: bookings@thecwcgroup.com; www.thecwcgroup.com.

London, UK, **November 1–2, 2001**, *The Transformation of Norway's Oil and Gas Industry: New Opportunities for International Investors.* Details: CWC Associates, 3 Tyers Gate, London SE1 3HX, UK. Tel: +44 (0)20 7089 4200; fax: +44 (0)20 7089 4201; e-mail: bookings@thecwcgroup.com; www.thecwcgroup.com.

Riyadh, Saudi Arabia
November 5–7, 2001

New Opportunities in Saudi Arabia's Energy Services Industry

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Fax: +44 (0)20 7089 4201
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Nassau, Bahamas, **November 5–9, 2001**, training course on *World Fiscal Systems for Oil & Gas.* Details: CWC Associates, 3 Tyers Gate, London SE1 3HX, UK. Tel: +44 (0)20 7089 4200; fax: +44 (0)20 7089 4201; e-mail: bookings@thecwcgroup.com; www.thecwcgroup.com.

Noorwijk Aan Zee, Netherlands, **November 6–7, 2001**, *16th Annual European Autumn Gas Conference.* Details: Overview Conferences, Rodwell House, 100 Middlesex Street, London E1 7HD, UK. Tel: +44 (0)20 7650 1418; fax: +44 (0)20 7650 1431/1401; e-mail: confs@economatters.com; www.overview-gas.com.

Rome, Italy
November 14–15, 2001

Iran: Future Directions and Opportunities

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www.thecwcgroup.com

London, UK, **November 12–13, 2001**, *Middle East & Central Asia Upstream 2001.* Details: Cecli Kleingbiel, Marketing Manager, Global Pacific & Partners, 2nd Floor, Regent Place, Cradock Av, Rosebank, 2196, Private Bag X61, Saxonwold, 2132, South Africa. Tel: +27 11 778 4368; fax: +27 11 880 3391; e-mail: cecli@glopac.com or global.pacific@pixie.co.za; www.petro21.com.

Milan, Italy, **November 13–14, 2001**, *Financing Strategies to Win Market Share in Italy's Liberalizing Power Market.* Details: Power Italia, WBR Ltd, 408 The Strand, London WC2R ONE, UK. Tel: +44 (0)20 7759 9000; fax: +44 (0)20 7759 9001; e-mail: poweritalia@wbr.co.uk.

Houston, TX, USA, **November 13–15, 2001**, *Overview of the Oil, Gas and Power Business.* Details: IHRDC Headquarters, 535 Boylston Street, Boston, MA 02116, USA. Tel: +1 617 536 0202; fax: +1 617 536 4396; e-mail: corporate@ihrdc.com; Web site: www.ihrdc.com.

Brussels, Belgium, **November 20–21, 2001**, *2nd Annual European Renewables Summit.* Details: CWC Associates, 3 Tyers Gate, London SE1 3HX, UK. Tel: +44 (0)20 7089 4200; fax: +44 (0)20 7089 4201; e-mail: bookings@thecwcgroup.com; www.thecwcgroup.com.

Madrid, Spain, **November 26–27, 2001**, *European Power Market: Strategies for Profitable Investment.* Details: CWC Associates, 3 Tyers Gate, London SE1 3HX, UK. Tel: +44 (0)20 7089 4200; fax: +44 (0)20 7089 4201; e-mail: bookings@thecwcgroup.com; www.thecwcgroup.com.

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Contributors

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

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Towards a fairer world

The world's industrialized nations must shoulder their responsibilities in the battle against global poverty

When the resumed Sixth Conference of the Parties (COP6) to the United Nations Framework Convention on Climate Change (UNFCCC) ended in the former German capital Bonn recently, the nations of the developed world — or most of them anyway — very probably breathed a collective sigh of relief. Just a few months earlier, the original COP6 in The Hague had collapsed amid a great deal of acrimony and finger-pointing. The delegates in Bonn were no doubt pleased to have avoided a similar outcome second time around. Michael Zammit Cutajar, the Executive Secretary of the UNFCCC, commented that the meeting had "succeeded in making the Kyoto Protocol ratifiable".

OPEC's objections to the Kyoto Protocol — that its implementation as it stands would have the effect of depressing oil demand, leading to crippling financial losses amounting to many billions of dollars for its Member Countries — are well known, having been voiced at the series of COP meetings and elsewhere. It is not our purpose to discuss the issue further here. The debate about the Kyoto Protocol will continue in the appropriate international forums, the next significant stage in the debate being COP7 in Marrakech, Morocco, from October 29 to November 9 this year.

The course of events in Bonn, however, raises a broader question, and that is the issue of nations taking — or seeking to avoid — responsibility for their own actions. While many of the countries found themselves striving towards a common goal, one nation stood conspicuously apart from the rest. The United States, which is the world's biggest polluter, refused to sign up, saying that it was not in its economic interest to do so. Clearly, the USA is a sovereign nation, and it is not for OPEC to pass judgement on the actions of sovereign nations. But in this case, when we are dealing with emissions of greenhouse gases, there is one simple fact that cannot be ignored: pollution, to borrow a popular phrase, "travels without a passport". Action (or lack of it) taken in one country can affect the whole Earth. Every nation must play its part. No country can afford to stand idly by.

By contrast, if we are seeking an example of a country facing up to its responsibilities on the international stage and taking the necessary action, we need look no further than the special feature on Nigeria beginning on page 8 of this issue of the *OPEC Bulletin*. Gas flaring is a very serious problem in Nigeria, accounting for a significant percentage of all gas flared worldwide. The stark fact that the nation's hydrocarbon production is itself generating considerable pollution is acknowledged by the Nigerian government, and that is precisely why the country has set itself a target of achieving zero gas flaring by 2008. Nigeria is not a rich country, but its government has recognized the problem and is doing what needs to be done. It goes without saying, of course, that all the OPEC Member Countries are fully aware of their responsibilities towards the global environment and are taking appropriate measures. If developing nations, with their relatively limited resources, can do this, why cannot industrialized giants like the USA do the same?

Perhaps part of the reason is that — as has been said on numerous occasions — the biggest polluter of our planet is not any particular greenhouse gas, but poverty. It is all too easy to forget this fact if one lives a comfortable life in an industrialized country. For most of the population of the world's developing nations, however, poverty is literally inescapable. There is still a huge gap between the developed and the developing world. The conditions of terrible poverty in which much of the South lives ought to be a source of great concern for humankind. Such facts ought to make us more determined than ever to do what we can to continue the battle against poverty — and should make all nations realize that to do this, they need to put aside their differences and work together for the common good.

OPEC and the international oil market in the near future

*Although the world economy is currently facing a slowdown, the medium and long-term prospects for the international oil industry remain bright, writes OPEC Secretary General, **HE Dr Alí Rodríguez Araque***, in this article.*

Let me begin with a brief overview of the world economy. Last year, a combination of factors led to fears of an impending economic slowdown and, in some case, recession in the industrialized nations, especially the United States and Japan. In Europe, the situation was better, while developing countries benefited from improvements in the prices of raw commodities, and US demand for south-east Asian manufactured goods.

So far this year, a series of interest rate cuts by the US Federal Reserve seem to indicate increasing concern about the economic slowdown in the country, while the long-anticipated Japanese recovery has failed to materialize due to structural reasons. Growth in the euro-zone, although healthier than projections for the rest of the world, is expected to be somewhat slower in 2001.

Growing world demand

According to forecasts by OPEC's Research Division, world oil demand will grow by 1.3 million barrels per day, or 1.7 per cent, to reach 77.0m b/d by the end of this year. Meanwhile, non-OPEC supply will average 49.1m b/d in the same period.

Regarding the near future, various experts around the world say they expect oil consumption to rise from the present 75.7m b/d to about 84m b/d by 2005. Since OPEC holds 78 per cent of the world's proven oil reserves, a significant portion of this incremental demand is bound to be covered by the Organization's Member Countries.

Presently, OPEC possesses a combined excess capacity of about 2m b/d, which is likely to increase as most Member Countries are contemplating production expansion schemes. Furthermore, exploration activities, both onshore and especially in the deep offshore, are being pursued in many OPEC nations. Some of these projects have shown great potential and they should, in due course, add substantially to the Organization's reserves and production capacity.

This process has acquired additional vitality with invitations for the participation of foreign investors in many of the new projects. Thus, it is estimated that OPEC's output will increase by about 6m b/d by 2005. But, for these production increases to materialize, huge investments will be required. In turn, they will certainly depend on stable and fair oil prices.

The experience of the recent past has highlighted the fact that sharp fluctuations in international oil prices are not necessarily the result of changes in the relationship between demand and supply. Thus, OPEC's efforts to maintain the balance of market fundamentals, by either increasing or decreasing its output, do not always bring about the desired results.

Last year, for instance, OPEC raised its production level on four different occasions, to the extent that average international crude oil supplies for the whole year were estimated to be 900,000 b/d above actual demand. Nonetheless, prices remained stubbornly high, making it very apparent that several factors, external to the demand/supply balance, are having a great impact on crude prices.

Refining bottlenecks

Let us examine these factors in more detail. One of them is represented by bottlenecks in the US refining and distribution system, which have led to the particularly high refined product prices in that country at present. President George W Bush has recognized this problem. Over the past 25 years, the US has seen a sharp

* *Based on **Dr Rodríguez Araque's** address to the Montreux Energy Roundtable XII, Montreux, Switzerland, May 28–30, 2001.*

decrease in the number of domestic refineries whilst product demand has grown steadily. This has been partly due to increasingly stringent environmental regulations, combined with an inadequate and insufficient distribution network, which has worsened the situation. These problems have become particularly acute this year, as the peak summer driving season approaches.

Furthermore, high refined product prices in the US are having a knock-on effect on European prices. It should be noted that the efforts by OPEC Member Countries to expand their own refining capacity can certainly play a key role in contributing to solving the present US problems.

High product taxation

As refinery and distribution bottlenecks are particularly relevant in the US market, there is another issue that especially affects the European Union — high taxation on refined products. An average 68 per cent of the final consumer price paid by EU consumers is retained by their own governments in taxes, while a mere 15 per cent of that price goes to oil-producing countries.

By emphasizing this point, we seek to bring home the message that OPEC is doing all in its power to contribute to oil market stability, and that other interested parties must also make their own contribution to attaining such an important goal. Nonetheless, we know that fiscal policy is a matter of sovereignty and we are respectful of that fact.

There are also other elements that equally affect oil prices everywhere. One of them is high maritime transportation costs. A large portion of the international tanker fleet is obsolete and its replacement has become particularly costly, as stringent environmental regulations mandate that every new tanker must be double-hulled.

And last, but not least, another key factor that has an impact on prices is speculation in futures markets. The volumes traded in these markets sometimes exceed 150m b/d of oil, which is roughly double daily global demand. It has been demonstrated that speculation can distort prices by as much as $4/b either way. This highlights the huge difference that exists between the physical market, where tangible barrels are traded, and a virtual market, where transactions only involve paper barrels.

In OPEC, we have decided to tackle this problem by seeking to establish a new benchmark crude, which would better reflect the market's reality. The three benchmarks used at present — Brent, WTI and Dubai — barely represent 1m b/d of oil, while OPEC's exports roughly total 22m b/d. In our Organization, we believe that attaining greater market transparency is in the best interest of all parties concerned. Therefore, we would welcome the participation of other energy organizations, such as the International Energy Agency, in the search for a new marker crude.

'In our Organization, we believe that attaining greater market transparency is in the best interest of all parties concerned.'

Many countries have always dreamed of attaining self-sufficiency in different areas, including energy, but history and events have brought them back to reality. This is more so today than ever before, as globalization has become an obsession. Moreover, if we talk sincerely about globalization, we are talking about interdependence, which naturally includes energy, and oil and gas.

In his recent announcement of a new US energy plan, President Bush said: "Our dependence on any one source of energy, especially a foreign source, leaves us vulnerable to price shocks, supply interruptions, and, in the worst case, blackmail."

It should be emphasized that OPEC Member Countries are not blackmailing anyone by shutting down production. Quite the contrary, many of our Members are in the process of opening up their oil sectors to foreign investment, in order to improve their production potential.

These efforts will play a key role in solving the present US problems. In OPEC, we understand the concerns of consuming countries and we have repeatedly stated the importance of combining our efforts so that, together, we can find solutions to the most urgent problems of the world oil industry.

Nobody can argue against the need for maintaining a good relationship with nature. But it must be understood that environmental problems are due to the growth of the world's population, which has led to an expansion of activity in order to satisfy the demand for goods and services, under which energy takes a very relevant place. But, just as man cannot give up agricultural activities, city development, or road construction, because these activities affect the environment, it is also unthinkable that man could give up energy.

Environmental impact

Thus, the problem lies in how to minimize the environmental impact of energy. Such a goal, naturally, has its own cost — to apply new technologies for the extraction of oil, to develop new technologies to build new refineries, to offer products of better quality. The problem is then who bears such a cost. Since it cannot be producers alone, discussions with consumers should focus on how to share those high costs.

The position of the new US Administration, which has questioned the Kyoto Protocol targets, underlines yet again the fact that we are faced with a problem that is not easy to solve.

Let us now move on to examine the topic of global energy investment. According to OPEC's World Energy Model and other studies by independent researchers around the world, there is no shortage of capital for investments in the global energy sector, especially for oil.

Nonetheless, there is increasing competition for that capital — investors must first decide which energy source gets what portion of their funds for expansion projects, and this naturally leads to competition among producers.

Promising prospects

In fact, the consensus of many studies, including our own in OPEC, is that in the medium to long-term, the prospects for investment in the oil industry are quite promising. Already, many OPEC Member Countries have taken the initiative of promoting enhanced investment through joint ventures and production-sharing schemes.

Moreover, the present oil price level, which is largely the result of OPEC's efforts, plays a key role in making investment more attractive. This new reality contrasts sharply with the situation in 1998, when investment fell dramatically as a result of the collapse in oil prices.

According to recent statements by International Monetary Fund officials, the world economy is slowing down, but that should be short-lived. As far as the oil market is concerned, there is no doubt that prospects are far brighter now than they were just a year ago. This is largely due to OPEC's pro-active approach and decisive actions, plus the support of some independent producers.

'There is no shortage of capital for investments in the global energy sector, especially for oil.'

Most studies show that, despite a slower demand growth rate foreseen in late 2001 and 2002, rising oil demand is projected to continue well into the new century. This process will take place as emerging developing nations, particularly in Asia, significantly increase their oil consumption levels. And thanks to our Organization's enormous reserves and low production costs, most of the additional oil will be produced by our Member Countries.

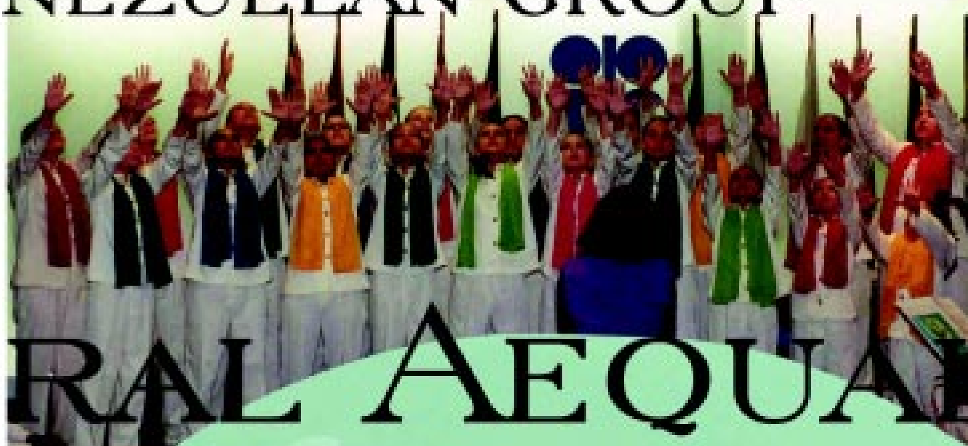
Promoting co-operation

Meanwhile, we will continue to pursue efforts to attain and maintain market stability, and in doing so, we will also promote co-operation among all oil producers and between producers and consumers. There is no doubt that this will lead to a more conducive environment for investment in our industry.

We are confident that we will succeed in these efforts, as all interested parties are becoming increasingly aware that everything in the oil business is closely interrelated.

OPEC is thus set to face with absolute confidence and commitment the future challenges and great opportunities that are likely to arise in the years ahead.

Venezuelan group Coral Aequalis gives concert at OPEC Secretariat



Venezuela's Ambassador to Austria, Gustavo Márquez, together with the choir's conductor, Ana María Raga.

The Venezuelan group Coral Aequalis gave a concert of choral music from their country in the press room at the OPEC Secretariat on August 7, 2001. The group, which comprises 21 girls aged 6-17, is the only group from the Americas which was invited to participate in the Vivace International Choir Festival 2001 in Veszprém, Hungary, and the 2nd International Girls' Choir Festival in Riga, Latvia.

The performance was arranged in co-operation with the Venezuelan Embassy in Vienna, and was attended by the Ambassador, Gustavo Márquez.

æqualis

Cantamos ... el mundo

GIRA EUROPA 2001

Nigeria:

a nation with a rich history, a vibrant oil and gas industry and a highly promising future

*The OPEC Secretariat, through its flagship publication, the monthly OPEC Bulletin (which is also featured on the Organization's Web site at **www.opec.org**) informs the huge readership about activities in the petroleum sector of our respective Member Countries. In pursuance of that objective, the Secretary General sent letters to those Member Countries that have not been featured for quite some time. Nigeria responded by inviting OPEC's Public Relations & Information Department (PRID) to send a team of journalists to do a Member Country report, with a focus on the petroleum sector. It was approved that the Head of PRID, **Farouk U Muhammed, mni**, (pictured here) should undertake the mission.*

I departed on April 5, 2001, for the ancient and historic city of Kano, which is about four and a half hours' drive from Nigeria's federal capital, Abuja, home to the corporate headquarters of the Nigerian National Petroleum Corporation (NNPC).

The mission, which was originally scheduled to end at the Department of Petroleum Resources (DPR) in Lagos on April 18, was increased by three days because of some public holidays in the country. Upon my arrival in Kano, I was received by a senior Public Affairs Manager of the NNPC, Kehinde Obateru and a photographer, both of whom were attached to me until my departure from Lagos to Vienna, on April 21.

Throughout my mission, I experienced the kindness and support for which Nigerians are generally known. These positive traits were abundantly exhibited by the former OPEC Secretary General and now Presidential Adviser on Petroleum and Energy, Dr Rilwanu Lukman; the Group Managing Director of the NNPC, Jackson Gaius-Obaseki, who was also my chief host and indefatigable worker; the Managing Directors of the numerous NNPC subsidiaries; the competent professional staff of the Group Public Affairs Division led by their able General Manager, Ndu Ughamadu; and indeed all the NNPC and

Nigeria LNG staff that I came into contact with around the country.

However, before reporting on the petroleum industry and other related areas, it may be instructive to put the Nigerian situation in proper context, in terms of its socio-economic and political activities.

Overview of Nigeria

Nigeria is a fascinating country, from whatever perspective it is viewed. Nigeria, with a land area of 923,770 sq km, and an estimated 120 million people, is the most populous black nation in the world. The country, with an annual population growth rate of 2.8 per cent, is also the most populated in Africa.

Perhaps uniquely, apart from the three main ethnic nationalities — Hausa/Fulani, Yoruba and Igbo — the country has about 200 other distinct ethnic groups. In the religious sphere, the northern part of the country is populated mostly by Muslims, in the west, many families have both Muslims and Christians, as well as traditional religious practitioners.

Consequently, about 50 per cent of Nigerian's total population belongs to the Islamic faith. Approximately 35 per cent are Christians, mostly from the east and parts of the west and the north. The remaining estimated five per cent fall into the category of traditional worshippers.

Nigeria negotiated and got its independence in 1960, from its former colonial ruler Britain. The first civilian government was patterned after Britain's parliamentary system. At that time, Nigeria had only three regions: northern, western and eastern, each headed by a premier. At the centre was a Prime Minister and head of the federal government.

Six years after independence, the army overthrew the elected Tafawa Balewa government. Eventually, the nation fought a 30-month civil war from 1967 to 1970. Since independence 41 years ago, the Nigerian military has held power for a total of about 30 years. Nigeria has had a 36-state structure for almost 10 years now, all created by successive military regimes starting with 12 states in 1966.

In 1979, the military government, then headed by General Olusegun Obasanjo, the present civilian President, voluntarily handed over power to the elected civilian government of Alhaji Shehu Shagari. Again in 1983, the military overthrew Shagari's government. Since the voluntary handover of power by the military in May 1999, each state has been run by an elected governor and an equally elected civilian State Assembly.

At the federal level is an elected Executive President, and a National Assembly made up of a 109 elected Senators and 370 elected National Representatives. The President, State Governors and members of the National and State Assemblies were elected on the platform of either the ruling Peoples Democratic Party, All Peoples Party or Alliance for Democracy. The Nigerian Constitution does not provide for the election of independent candidates.

'Throughout my mission, I experienced the kindness and support for which Nigerians are generally known.'

Without going into further details, it is enough to say that Nigeria, after its independence, had the opportunity to become a great industrial and economic powerhouse. This was because all the necessary elements were in place including an enthusiastic, disciplined and forward-looking population; a relatively efficient civil service; a sound educational system; a vibrant press, and of course, abundant natural resources.

However, Nigeria's great leap forward has been stifled since January 15, 1966 when the military seized power from the elected civilians. Nevertheless, there is hope of putting Nigeria fully back on track, provided the country is able to eliminate or drastically reduce its ethno-religious conflicts and corruption, especially in the public sector. The present elected government of President Obasanjo is pursuing the daunting task of fighting corruption as well as harnessing Nigeria's abundant human and material resources so as to positively move the country forward.

Apart from oil and liquefied natural gas (LNG), Nigeria also exports fruit juices, cocoa, rubber and other farm products. Items that are manufactured for local consumption include chemicals and pharmaceuticals, textiles, leather products, footwear, carpets and rugs, pulp, paper and paper products, and non-metallic mineral products.

Others are plastics, rubber and foam products, basic metal, fabricated metal, iron and steel, motor vehicles and miscellaneous assembly, tobacco, beverages and various food products. Nigeria's real GDP is estimated to slightly improve from 3.5 per cent last year to 3.6 per cent at the end of the current year.

Regional power

Despite its gargantuan problems, Nigeria is the dominant economic and military power in the West African sub region. Nigeria was instrumental in the establishment of the Economic Community of West African States (ECOWAS) which has its headquarters in the Nigerian capital, Abuja. With Africa as the centrepiece of its foreign policy, Nigeria played a key role in the formation of the intervention force known as ECOMOG (the Economic Community Monitoring Group).

Furthermore, the country provided 12,000 troops, which form the bulk of the ECOMOG forces. The ECOMOG force led by Nigeria was instrumental in ending the Liberian civil war, as well as the war in Sierra Leone, with the enthronement of elected governments in both countries. Going farther afield, Nigeria has, since independence, contributed troops for United Nations peacekeeping operations in Lebanon, Congo, Bosnia and other flashpoints around the globe.

Apart from the military sphere, Nigeria has contributed very able personnel in various sectors around the world. A few

examples would serve to drive the point home. In the 1970s, Nigeria's Chief Teslim Elias served for many years as President of the World Court at The Hague. Other Nigerians, such as Dr Nnamani and Prince Bola Ajibola, put in several years of meritorious service as Judges of the World Court. Nigeria's Professor Adeoye Lambo served for about a decade as Director General of the World Health Organization. Likewise, Chief Emeka Anyaoku served for 10 years as Secretary General of the Commonwealth.

And talking about Secretaries General, just at the end of last year, Dr Rilwanu Lukman completed his second three-year term as Secretary General of OPEC. By sheer coincidence, another highly-regarded Nigerian in the person of Dr Y Seyyid Abdulai has been serving as the Director General of the Vienna-based OPEC Fund for International Development. Nigeria has produced one Nobel Laureate in Literature, that is Professor Wole Soyinka.

The list of Nigerians that are making highly significant contributions around the world could go on and on. Suffice it to say that there are thousands of Nigerian medical doctors, engineers, architects, lawyers, scientists and other professionals who are working in both the private and public sector industries around the world. No doubt, Nigerians are very adventurous people.

Highly talented manpower

While such contributions by Nigerian experts around the world can be said to be positive because they are exposed to more sophistication, there is a flip side to this contention. The other point is that having such a huge number of highly-talented manpower working outside Nigeria, constitutes a serious brain drain to the nation. It is believed that when the appropriate enabling environment is created in the country, many of these experts would opt to return home where they can serve with dignity either in the private or public sector.

Just like in other societies around the world, Nigeria has its own fair share of miscreants and dubious individuals. To be sure, these are a negligible minority in relation to the total number of Nigerians who travel abroad for their legitimate businesses. However, this relatively small handful of persons has given the country a bad image.

Past governments, and particularly the present democratic one, have been waging a relentless war against such law-breakers. On balance, the country has a lot more to look forward to.

'The list of Nigerians that are making highly significant contributions around the world could go on and on.'

Firstly, the country's huge and growing population is a solid market for the various products of hundreds of its industries and factories. However, the government must continue to encourage these manufacturers to increase their capacity utilization, which in many cases is presently as low as 30 per cent. Also, the purchasing power of the citizens must be significantly improved through the creation of jobs and economic activities in all sectors of the economy. Other markets for Nigerian manufactured goods include primarily the West African sub-region, the African continent and some countries around the world.

In addition to its vigorous fight against corruption as well as the provision of security to life and property, the Obasanjo government has been making some strategic moves in the economic arena. One of its cardinal programmes is the privatization of inefficient state-owned companies, in each of which the federal government has spent billions of dollars in the last decade alone.

These companies, which are viewed by Nigerians as liabilities, include the notoriously inefficient National Electric Power Authority (NEPA) and Nigerian International Telecommunications (NITEL), to name just two. They are responsible for power generation and distribution and telecommunications, respectively. In particular, these two entities have performed woefully over the years and have been greatly responsible for retarding Nigeria's industrial progress. This is because without steady electricity and telecomunications, there will be no meaningful development.

Role of oil and gas

Oil, for several decades, has been accounting for about 90 per cent of Nigeria's foreign exchange revenue. It is projected that this commodity and to a significant extent gas, shall continue to account for a huge chunk of the nation's hard currency earnings in the years ahead. Although Nigeria's democratic government is taking serious steps to wean the country away from over-dependence on oil, it will take many years before this process begins to bear fruit.

Meanwhile, it is the judicious application of the petroleum revenues, backed by a properly implemented privatization scheme and the creation of an enabling business environment, that shall stimulate real economic growth and development. These factors shall in turn determine the pace and extent of Nigeria's economic progress as the years go by.

The petroleum industry

Although Nigeria is a significant world oil producer and exporter, the nation is aptly described in technical circles as 'a gas country with some oil'. The reason for such an observation is not far-fetched. Oil exploration activities had gone on for about fifty years in south-western Nigeria, where the explorers made numerous bitumen seepage finds.

The lengthy effort eventually paid off. Since the discovery of oil in commercial quantities in 1956 by Shell, and the subsequent commencement of production with a modest 5,000 barrels/day, to a peak output of 2.3 million b/d in the 1980s, Nigeria's gas has been associated. In other words, most of the gas has been gotten as

a result of oil production. There has been no deliberate effort to specifically explore for gas.

Until a few years ago, all of the nation's gas has been flared. However, the respective governments of the recent past have initiated various schemes for the utilization of the gas by local industries, electricity generation and export in the form of LNG. These schemes are being accelerated by the present civilian administration.

In the interview on page 12, Nigeria's Presidential Adviser on Petroleum and Energy, Dr Rilwanu Lukman, elaborates on the country's petroleum policies including the plans to substantially increase the oil and gas reserves through exploration and production both onshore and especially shallow and deep offshore, a significant increase in daily oil output, the achievement of zero flaring of gas, and much more.

Great potential

On page 16 is an interview with the Group Managing Director of the Nigerian National Petroleum Corporation (NNPC), Engineer Jackson Gaius-Obaseki. He spoke on a wide range of issues including the tackling of unsteady supply of petroleum products, that had been plaguing the nation for years prior to his appointment, unsatisfactory performance of the nation's four oil refineries, and the challenges and great potential that abound in the petroleum industry.

Towards the end of this report Chief (Dr) Imeh Okopido, the Minister of State for Environment, makes an incisive contribution about the government's stance on the environment, including of course, the subject of gas flaring and other projects that are aimed at enhancing the nation's environment in many areas of economic activities.

Although both Dr Lukman and Engineer Gaius-Obaseki touched on the NNPC and the activities of its ten wholly-owned subsidiaries, I had the opportunity of visiting some of them and speaking with cross sections of the staff as well as the respective Managing Directors or Group General Managers, regarding their operations.

'Nigeria's democratic government is taking serious steps to wean the country away from over-dependence on oil.'

The brief history of the NNPC which now follows both concludes this introduction and will serve to set the scene for the rest of this report.

Formation of the NNPC

The Nigerian National Oil Corporation (NNOC) was established in the early 1970s (shortly before Nigeria joined OPEC as its tenth Member) as an organ for exercising control over the industry, which was then dominated by multinationals.

The Corporation also provided a platform for the Nigerian government to take up participating interest in operations of the companies, starting with 331/3 per cent in 1965, which was increased to 60 per cent in 1974. These acquisitions, which covered all the operating companies, gave birth to the joint venture relationship which has lasted to date between the government and the major oil producing companies. The NNPC was established in April 1977, according to its GMD, through the merger of the NNOC and the Ministry of Petroleum Resources.

The NNPC was given powers and operational interests in refining, petrochemicals, and product transportation as well as marketing. This was in addition to its exploration and production activities, which were carried out mainly offshore Niger Delta, by its forerunner, the NNOC.

Between 1978 and 1989, the NNPC constructed refineries in Warri, Kaduna and Port Harcourt, and took over the 35,000 b/d Shell refinery established in Port Harcourt in 1965. Furthermore, the Corporation constructed several kilometres of pipelines, pump stations and depots for distribution of petroleum products throughout the country.

It also pioneered exploration activities in the Chad Basin around Maiduguri in the northern part of Nigeria. The NNPC, which currently has over 14,000 employees, is working very hard to significantly increase the country's oil and gas reserves, as well as level of daily production.

INTERVIEW

Nigeria:

making maximum use of its oil and gas resources for the benefit of the West African region

Nigeria's plans for the future of its oil and gas industry and its role in OPEC are among the themes discussed in this interview granted by the nation's Presidential Adviser on Petroleum and Energy and former OPEC Secretary General, ***HE Dr Rilwanu Lukman*** *(pictured below), to the OPEC Bulletin's Editor-in-Chief,* ***Farouk U Muhammed, mni****, earlier this year.*

Question: Your Excellency, I wish to convey to you the best wishes of the Secretary General of OPEC, your successor, HE Dr Alí Rodríguez Araque, and the entire staff of the Organization.

We have visited different oil and gas installations around the country, and have had numerous interviews and discussions with the Group Managing Director of the Nigerian National Petroleum Corporation (NNPC), most of the Managing Directors of the Corporation's subsidiaries, the Minister of State for Environment and so on.

In your capacity as the Special Adviser on Petroleum and Energy as well as the Chairman of the Board of the NNPC, perhaps you can start by talking about the efforts that are being made to substantially increase Nigeria's oil and gas reserves and daily output. What are the challenges and opportunities?

Answer: Thank you very much Farouk. We are happy to have you and we welcome the opportunity that you are offering us to express our plans for Nigeria's oil and gas development, which are vital sectors of our country's economy.

One area that is engaging our attention is the expansion of the upstream sector of the oil industry, particularly the efforts to increase our national reserves and production capacity. We have in the plan over the next 20 years or so to more than double our reserves and our capacity. We hope to go from the current capacity of 2.4 million to 2.5m barrels/day, to 3m b/d, then to 4m b/d and ultimately to 5m b/d in 2020 or thereabouts.

Of course, we have to expand the reserve base simultaneously in order to support this expected level of production. The expectation is that we shall increase the reserves from the current level of over 20 billion barrels to 30bn b, 40bn b and 50bn b. This is being done through a

series of exploration and development projects. In fact, many of these are already in place.

Meanwhile, the bidding rounds that were done about four months ago are now in the final stage of negotiations for the signing of the contracts. We shall follow that with another bidding round during the fourth quarter of this year.

In addition to that, we are introducing the programme of the development of our marginal fields. This will take care of certain reserves that were probably abandoned prematurely. Along with all these, plus projects both onshore and offshore, most of the new concessions that we are going to develop would be in the shallow, deep and ultra deep offshore areas.

Along with the development of new oil reserves and production capacity, of course there is the parallel development of gas resources, which will constitute the development of our gas sector over the next five to ten years. Perhaps we can talk about that later.

Q: Regarding the reserves and production expansion scheme, I spoke a few days ago with the Managing Director of the Nigerian Petroleum Development Company (NPDC) and yesterday the GMD of the NNPC briefly touched on the subject. The NPDC is the only subsidiary that by law, is into oil exploration and production. What plans do you have for the company to have international exposure, through joint ventures, raising of capital and so on?

A: The NPDC was set up specifically to enable the NNPC to develop independent, indigenous capacity in the upstream sector. They were allowed some concessions, and we intend to allow them to have more concessions either on their own account, or in conjunction with selected, appropriate partners.

Already the NPDC has gone far with its arrangements with Italy's Agip to develop OML 91, which is one of the two that the NPDC has presently.

We expect the NPDC to be able to repeat this arrangement, but not necessarily in the same format. The company will be encouraged to develop concessions in their own right so that they may increase the level of their production locally. Internationally, we shall encourage them to go offshore outside Nigeria, say, to other national oil companies.

Of course, we expect charity to begin at home. Therefore, we want the NPDC to consolidate its situation at home in order to enable the company to be in a better position to compete in other countries. It is a long-term plan, and we are hopeful that with time we will become a major player in that area.

Q: There are indications that the government may allow the establishment of private refineries. How would local investors fit in, given that it is a capital-intensive project?

'Nigeria will continue to be a devoted and dedicated Member of OPEC, and will continue to support its aspirations.'

A: First of all we have to put our own house in order. We have a local processing capacity of 450,000 b/d. Our four refineries are not able to achieve that level of output, even at the best of times. Assuming that we are able to put the present refineries back on their feet, and debottleneck, we should be able to increase their capacity.

The NNPC has calculated that because of the very huge increase in demand, over a period of time, we suspect that, given the fact that we are having to supply the West African sub-region, either through allocation of crude or export of petroleum products, there will be a need ultimately to increase the refining capacity in Nigeria. This is based on anticipated demand, if we talk only about our region. New refineries will be required.

The question then arises as to who will set them up? So, we are now looking at the option of allowing private refineries to be established. The modalities are being worked out, so that it can be done in an orderly and systematic fashion. We do not want refineries to be mushrooming all over the place, in a haphazard manner. Rather it is going to be organized, so that it meets projected demands to enable us to increase the value added on our crude oil. That would enable us to concentrate on what we believe is our rightful market in the West African sub-region. There is already lots of interest by both indigenous and foreign investors who would want to establish oil refineries. We shall start working on that scheme before the end of this year.

Downstream liberalization

The establishment of private refineries is tied up with the question of liberalization of the downstream sector of the oil industry. This is one of the major policy considerations we are working on, through the so-called programme of deregulation, or more appropriate pricing of petroleum products. We are handling that so as to ensure the most minimum disruption to the economic and social life of the country. We hope that it will benefit all the sectors of our economy and our people. So, before eventually the private refineries are built, the timing and the sizes would have to be moderated, so that the exercise is done in a wholesome manner, so that we can derive maximum benefit.

We shall do so when we need to address the question of liberalization, because we have to understand that where we are producing just under 2m b/d, the amount of crude available is itself limited. So, we are already consuming more than 300,000 b/d. This is going to rise to 400,000 b/d. As time goes on, more and more of our crude will go into refining for local consumption. Part of the thing we have to look at is making it possible for the private refineries not only to use local crude, but also to have the option of importing crude from outside, just like we are having to do for the Kaduna refinery.

Q: You mentioned deregulation. Can you

clarify that, because when that word is said, people generally think in terms of increases in the prices of petroleum products. What are the medium and long-term benefits, and what are the implications for the economy and the Nigerian people?

A: Well, the government has come to the conclusion that sooner or later, the petroleum sector has to be liberalized in the best interest of the national economy and our people. This is because the aberration we have in the market place now, that is to say, the subsidies that are in place, have to be addressed to ensure that the country derives maximum benefit from the crude that is being utilized locally.

It is not just a matter of price adjustment, it is also a matter of ensuring value. If the so-called subsidy is removed and a more appropriate price is charged for the crude, of course extra revenue will be generated, and the government will formulate how best to utilize the additional income so that it will benefit the people. So, basically, that will be the rationale. By removing the subsidy, you are bound to incur certain, shall we say, negative aspects. For example, the cost of transportation may slightly go up, inflation may also increase a bit.

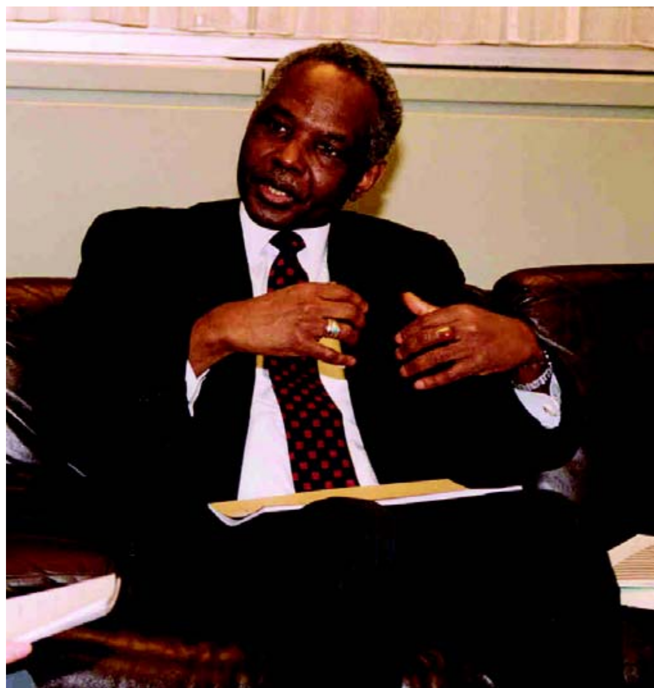
However, we have to compare that with the larger benefits such as better supply and better pricing. So, when we do liberalize, the monopoly which the NNPC now enjoys will disappear. People will be free to bring in products and there will be more sources of supply and availability. This means prices will move up and down, and ultimately they will be lower than they would have been otherwise. In other words, at the end, people may get petroleum products cheaper than they would otherwise.

Market distortion

I am not saying that prices will go down now. What I am saying is that if you don't alleviate this current distortion in the market, then you may ultimately end up by losing as a nation. Right now there is a lot of discussion about this issue. Due to misinformation and lack of full appreciation of the whole dimension of the problem, some people may become sentimental. So we have embarked on a programme of sensitizing the people, explaining to them what the full implications of the deregulation are going to be, so that by the time we are convinced that it is the right thing to do, we do not expect to have any serious problems.

After all, it is not just the government, but the whole country that will get the extra revenue which will be channeled into those areas where it will impact directly on the welfare of the people. We have talked about more money for health care, more money for education, water supply. In short, there will be more money than is now available, for most of the things that people need.

Q: It appears that technical co-operation amongst the national oil companies (NOCs) of OPEC Member Countries is very minimal. Given that such schemes, as the one that is being discussed between Nigeria and Venezuela, can be mutually beneficial, do you plan to encourage such co-operation?



A: Well, I am hoping that by the time I settle down properly, we will develop this relationship with the NOCs of OPEC Member Countries. As you said, we have kicked off the initiative with Venezuela. I am going to Algeria soon and I will be speaking with Sonatrach, and later we shall be discussing things with our colleagues in Indonesia. Ultimately, of course, we will visit other OPEC Member Countries. We will build such relationships over a period of time with all the NOCs, in the spirit of the Caracas Declaration. We think it is going to be a very good development for the countries individually and for their respective NOCs.

Q: Nigeria has been a very committed member of OPEC, and you have served for two consecutive three-year terms as Secretary General of OPEC. Before then, you also served for an unprecedented eight terms (four years) as President of OPEC. What do you think the future might be in terms of Nigeria's involvement with OPEC?

A: First of all, I have no doubt in my mind that Nigeria will continue to be a devoted and dedicated Member of the Organization. Also it will continue to support the aspirations of OPEC. Furthermore, I am confident that Nigeria will do everything in its power to strengthen the Organization's position in the world oil scene, because it is in our interest to do so. Of course the role of OPEC will remain crucial to our future plans and prospects. So, OPEC can continue to count on Nigeria's solid support for the Organization.

Q: Perhaps we can shift a bit to the gas sector. Generally, it is believed that Nigeria has more gas than oil. However, the focus has always been on oil, and gas comes in only as an associated product. What will the picture be like if Nigeria gives gas exploration almost the same attention that oil has been enjoying these past decades? In other words, what are Nigeria's medium to long-term gas plans?

A: Well, like you said, we are very rich in gas, and we have very ambitious plans to develop our huge gas resources, both for export and for local consumption. As regards exports, we are already in the liquefied natural gas (LNG) sector, which is being vigorously developed. There are one or two more LNG projects which are being considered, and already we have signed a memorandum of understanding for the next one.

Gas pipeline project

Then we have the West African Gas Pipeline project to supply gas to the rest of West Africa. Looking inwards, we have planned to extend the current gas pipelines to several parts of Nigeria, and various studies are already being conducted in that regard. There are other government plans, principally to encourage the domestic use of gas. Already one of the major consumers of our gas is the power industry. This is now being expanded with the encouragement of the development of the independent power plants (IPPs) as well as emergency power plants (EPPs). These new IPPs and EPPs are going to consume quite a lot of the gas.

Then we have industries that are being encouraged to use the gas, like steel, fertilizer, cement, aluminum smelting, and petrochemicals, among others. Our plan is that by 2008 we will be using most of the gas along these avenues: LNG, West Africa, and others, so that by then we will put out the flares. At the moment we are flaring huge quantities of gas, the equivalent of 250,000 b/d. Once we can put out the flares, that would be equal to producing an additional 250,000 b/d.

The point is that the gas which is being flared now is mostly associated gas, even without exploring for gas on its own. But more importantly, what we are doing now with the current production programme is, we are requiring our producing companies to give us their plans for utilizing the gas which they have found, so that we can completely eliminate the need for flaring.

Q: Apart from other factors, gas flaring damages the environment, to some extent. Given the failure by past governments to enforce the stoppage of gas flaring, are you confident that this time around the 2008 deadline for putting out the flares will be met?

A: We are going to insist on it, as a matter of policy, and try to ensure that it does happen. Quite apart from the fact that it is very wasteful, it is, as you said, environmentally damaging. It is worth emphasizing that for prospectors to develop new oil finds, they have to tell us what they are going to do with the associated gas.

Commercial gas utilization

Then of course there are projects like gas to liquids and other ancillary industries that will help in the commercial utilization of the gas. Then there will be the use of the reinjection of the gas to enhance oil recovery in existing fields. These are among the helpful measures that are being implemented or will soon be effected. Thus, the idea is to encourage economic use for this gas, and of course, by so doing we shall be generating more revenues for the companies and the nation.

Q: Sir, I wonder whether you have any other comment. If not, I wish to thank you immensely for your time. I also thank the NNPC's Group Managing Director, Jackson Gaius-Obaseki for his support, and for the excellent co-operation which I got from the General Manager, Group Public Affairs Division, Ndu Ughamadu, as well as his very able assistant, Kehinde Obateru.

A: Thank you very much indeed.

Steering the Nigerian National Petroleum Corporation towards the future in a democratic Nigeria

*At the headquarters of the Nigerian National Petroleum Corporation (NNPC) in Abuja, the Group Managing Director, **Jackson Gaius-Obaseki**, spoke to the Editor-in-Chief of the OPEC Bulletin, **Farouk U Muhammed, mni**, about subjects such as tackling petroleum product shortages, building partnerships with international oil majors and making good use of the nation's gas reserves.*

Question: The last Member Country visit to Nigeria by an OPEC team was about 12 years ago. We are here to hear from you about the development, problems and prospects for the NNPC and its 11 subsidiaries. You have, within the four months of your resumption as the Group Managing Director (GMD) of the NNPC, made petrol available around the country, to the delight of millions of Nigerians.

Even though the job of GMD of the NNPC is a thankless task, can you start by telling us about your personal experience and about the company, which is the single largest employer in Nigeria?

Answer: First of all, thank you for coming all the way from OPEC in Vienna to discuss with us. Also, please convey my best wishes to your new Secretary General, Dr Alí Rodríguez Araque. I met him when he was Venezuela's Minister of Energy. He gave us full co-operation and support when we tried to establish a relationship with PDVSA, all in the actualization of the Caracas Declaration.

Soon after the Second Heads of State Summit, Dr Rodríguez Araque played a major role in the visit of PDVSA to the NNPC here in Nigeria. As you mentioned in your introductory remarks, it is true that I have a great team, and I see that as a blessing from God.

Q: The present democratic government will have been in office for two years in a few months' time. Can you now comment on the problems, opportunities, achievements, and vision that you have for the NNPC?

A: I can say that it has been two years of challenges and fulfillment. Certainly, the overall situation is not exactly the way we want it. But looking back, we believe that we have moved in the direction of positive growth. I think this is what is important. In fact, this is the first time that the NNPC has operated in a democratic system that is openly fighting corruption. These are tough challenges. It is true that we report to the President of the federal republic, but it is equally true that we report to Nigerians. I am called upon by various constituted authorities to account for one thing or the other.

You see, it is more like having a covenant with the government, because serious efforts are constantly being made to clean and sanitize the NNPC, because of the importance of the petroleum sector to the country. We are never afraid to explain anything to anybody. We are always prepared to explain to the world what we have done and indeed what we are doing. Frankly, there have never been any dull moments in the past two years. Also, working for the President is not easy.

In terms of where we are, I think we should reflect a little. We started very well

as the Nigerian National Oil Corporation (NNOC) in 1972. Our achievements were remarkable, and growth was rapid. In 1976 we made our first oil discovery offshore. Then, of course, several other successes followed. And as the exploration and production of crude oil was growing, there were lots of other activities, such as the construction of many power plants. In fact, those of us who joined the NNOC in 1972 looked forward to the realization of that vision of harnessing a world-class oil and gas company.

It is worth mentioning that we grew to a stage where it became obvious that we could not manage any more as one single unit. And that gave rise to three years (1985-88) of strategic planning. This action led to the creation of subsidiaries. Incidentally, Dr Lukman was the Minister of Petroleum at the time. Of course, activities increased in 1979 and the present President was then Head of State, when these things were created and he knew where we were supposed to be.

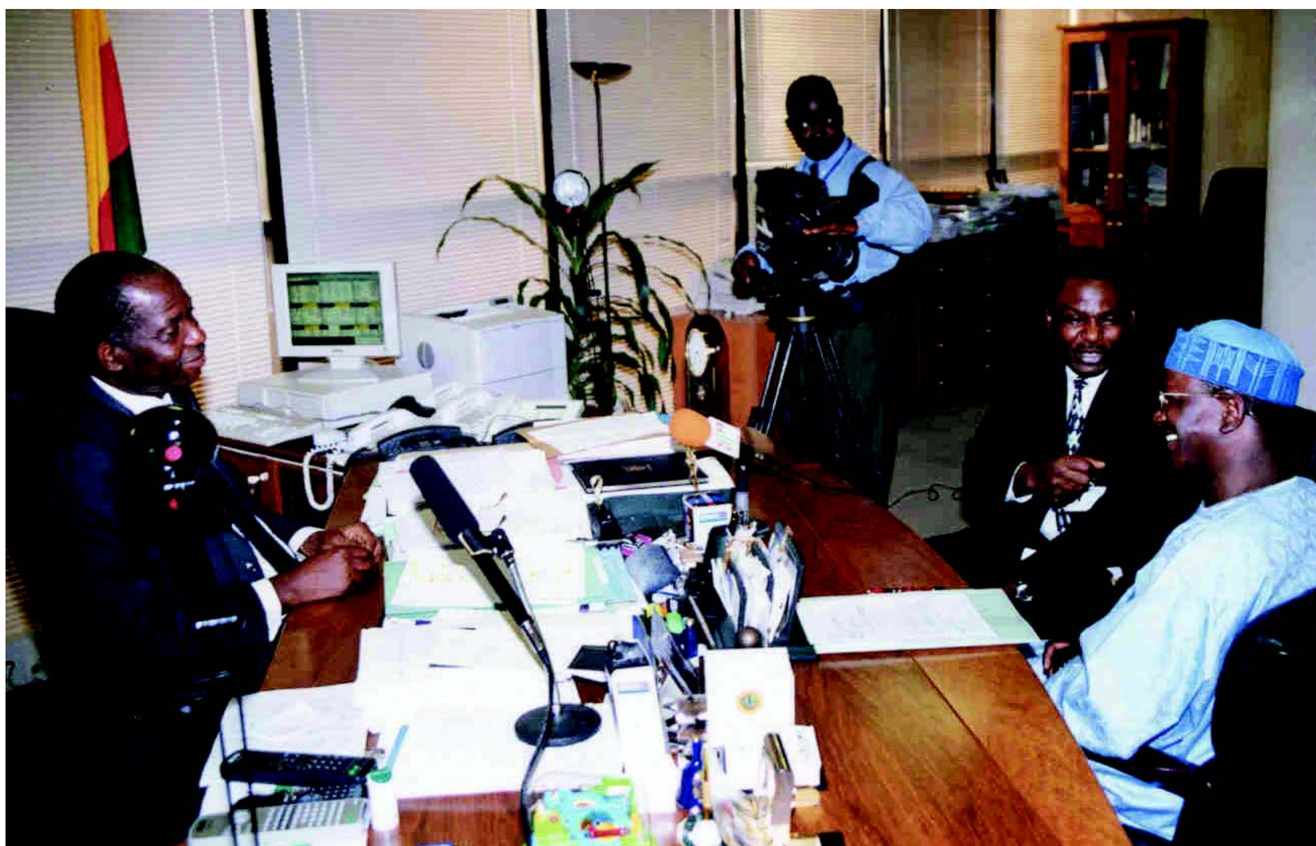
Interestingly, one of the questions he asked me (before my appointment) was: "Young man, you were there when all the arrangements were made. What happened?" That was on May 31, 1999. We had a long chat, and he said: "Since you were there when it all started, you go back, find out where it veered off and bring it back on track."

He continued: "When I was there (as Head of State), the NNPC gave money to the federal government, but right now you do not seem to have money to give to the government."

I believe that the NNPC should be there as a fall-back position for the government. The President said to me, you go back, check your people, and there will be no more interference in your operations, which you should run on a commercial basis. I will keep my people in check.

When I resumed, I did two things. First, I called the accounts and finance man and said to him, if we are prudent, why can't we manage? If we don't go cap-in-hand begging the government for money, then we might win back our respect. And he assured me we would do just that.

Next I held a meeting of top management and asked if we needed a change. Everybody said yes, we needed a change.



Seen here during the interview are the NNPC's Group Managing Director, Jackson Gaius-Obaseki (left), the Head of OPEC's PR & Information Department, Farouk U Muhammed, mni (right) and (next to him) the General Manager of the NNPC's Group Public Affairs Division, Ndu Ughamadu.

Actually, when we drilled the first well in 1976, it was like going to the moon, because it was the first time that Nigerians all by themselves achieved such a feat. I remember while stepping off from the rig's ramp, we having made the discovery, I felt like an astronaut stepping off from his spaceship. It was a great feeling of victory for us as Nigerians.

After I assembled a new team, we immediately set to tackling the serious challenges. Our first major task was to change the NNPC's negative perception in the minds of the public. Next was to buy back the corporation's integrity. Additionally, the most important task was to maintain a focus and then push forward, never wavering and trying not to falter. So, basically, that is really what we have set out to do.

Regarding other challenges, of course we all know what this country has gone through, in terms of the functioning of the refineries, fuel supply, the distribution system and so on. Nobody really understood or ever estimated the exact depth of the rot. But we still felt that no matter what the situation was, we knew what to do to make it better.

So with the little that we have, we did an assessment and established that there were enough petroleum products to satisfy the country's consumption.

Also, we had three outlets, that is, oil companies in which the NNPC has a substantial interest. Furthermore, we had a nationwide distribution network. We thought we should use all these as useful vehicles through which we restored normalcy in the system.

Commitment to excellence

We then faced the human factor. We then revived our vision of being a world-class oil and gas company that is driven by shared commitment to excellence, and that is profit-oriented. Therefore, we had to change our ways of doing business. We succeeded to a large extent, otherwise we would not be at this point today.

But then again, the hard decisions had to be taken. Those that were amenable to change, we changed them, and those who could not change were eased out. We never terminated the appointment of or dismissed anybody. We felt that within the prevailing conditions, these people made some contributions. Therefore, we retired them but looked after them.

We then faced the four refineries and tried to sanitize and bring them back to professionalism. The refineries have not been properly looked after for ten to fifteen years. And because the machines had snapped, we had to depend on importation of petroleum products for a long time. Now, rather than do a quick fix on the refineries, we believed instead that a good job should be done. To remain focused, we must be deaf to irritation. Luckily, those who have given us the mandate knew what they were talking about. The President knew, the Vice-President knew, and the President has an Adviser who was once a Minister of Petroleum. So really, selling our strategy to them was like preaching to the converted.

However, the only alternative for making fuel available nationwide at that time, was importation. The four refineries were being given 300,000 b/d. But if you look at the yield, assuming you are working at 100 per cent efficiency, you couldn't produce what was required. This is because, from 1999 when we supplied between 12 million and 15m litres/day of premium motor spirit (PMS), around the middle of 2000, supply jumped to 18m lt/d.

‘When we drilled the first well in 1976, it was like going to the moon … I felt like an astronaut stepping off from his spaceship.’

However, by the Christmas of 2000, it zoomed to 22m lt/d. We thought the substantial increase had to do with the festive season when many people travel by cars and busses around the country. But then since the beginning of this year, supply has been averaging 25m lt/d. In fact there was a day it climbed to 27m lt/d. So, to move from 12m lt/d to 27m lt/d within two years, you can imagine what it took to get to where are.

Within that period, our investments in the marketing companies that we used were divested. This means, we now have no intervention vehicles anymore. Anyway, the good story was that we took our time, and gradually brought the refineries back. For example, today, all the units in the Warri and Port Harcourt refineries are working. Port Harcourt refinery recently had problems with its power-generating unit. We had to fly in the expert from France. You see, unlike in the past, when they managed to fix the problem only for it to recur, this time around we decided to bring in the expert, and right now he is there trying to sort out the problem.

Regarding the Kaduna refinery, nobody believed that it would work. But Kaduna has been running since October 28 last year, and it has never gone down. Crude distillation unit (CDU) 1 is running at 70 per of capacity, and on CDU 2, we are now doing the evacuation of the vacuum distillation unit that was producing before the fluid catalytic cracker went down. Arrangements are on to change the cycle, and once that is done, all four units will be running fully.

Q: Although I shall later be talking with the NLNG people, maybe you want to make some remarks regarding the gas sector, bearing in mind that you were the Chief Executive of the Nigerian Gas Company (NGC), before your present appointment as GMD of the NNPC.

A: Of course, gas has been a remarkable development in general. The liquefied natural gas (LNG) project, as we all know, is a huge success story. Then there is the gas-to-liquids project that we are doing with Chevron, and the western LNG plant is under study, and there is also a third LNG project with Agip that is under consideration. Of course the IPPs are coming to help with power generation and the test run by Agip is going to be in Kwale, Shell is doing its test run in Afam, and of course the one by Mobil is already on the ground. On the exploration and production (E&P) side of it, we have tried to bring some sanity into the system.

One may blame the earlier efforts by the companies, but one should never forget that they operated under a very difficult environment. So they had to provide too much for this factor. But today it is a different matter. We are trying to bring everybody back by saying the risk is not high any more, so give a little more to the country. Of course it is a bit difficult.

However, I believe that once we sustain the pressure, we shall achieve our gas objectives.

Q: Thank you for touching on efforts regarding the gas sector. How about the NNPC, what is happening?

A: On the NNPC side, we have the Nigerian Petroleum Development Company (NPDC), which is our own small E&P outfit. In any oil and gas business, the E&P is its heart, and all other activities revolve around it. There was a time that the government toyed with the idea of privatizing the NPDC, but we advised against it. This is because it would be the worst mistake anybody can make. Apart from E&P being the heart of the operations, it is a vehicle that you must use for capacity building, there is no other way. In all the joint venture (JV) arrangements we have, there is always a clause that allows us to take over. So, unless you have a place like a nursery, where you can do capacity building, there is no way you can make progress.

'This is the first time that the NNPC has operated in a democratic system that is openly fighting corruption.'

Apart from that, one good story is that, of all the discoveries that were made in the late 1980s, when the NNPC made discoveries at that time, where the estimated reserves were in excess of one billion barrels, some blocks were given to indigenous operators and some to multinationals, there was one that was left and that was Operating License (OPL) 91. The last two military administrations tried to give the block to the multinationals, but that did not go through, until the present democratic government assumed power. The first thing we did was to write to President Obasanjo and said we are not asking the federal government for money, but allow us to go into an alliance with a reputable private sector partner. We got the go-ahead, we then advertised, went through the open tender process, and finally Agip Energy was chosen as our JV partner.

Thus the stage was set for our two companies to jointly develop OPL 91, and the estimate came to about $150m, which Agip Energy will provide, and it was expected that they would recover their investment in the first two years. The risk for them is virtually not there because of the huge discoveries that have so far been made. Additional results that we are getting are that more discoveries are even being made. So, we are going to find that at the end of the day, the results are going to be far in excess of what we had thought. So, that is one big success story. The point though is that, after five years of our joint operation, NPDC is supposed to take over and continue to run everything.

Q: Can you now talk about the supply of petroleum products around the country, because you seem to have improved the situation within the short period of your assumption of office as GMD?

A: Regarding the supply of petroleum products, I think that today, you can drive into a filling station, buy fuel and drive off. Occasional hiccups we will keep having, because we are not marketers. The marketers are doing their thing, and the Department of Petroleum Resources is waking up. So, until you get everybody involved in the distribution chain to perform their role properly, these hiccups will recur. But certainly, the worst situation today is better than the best situation of yesteryear. So, we are marching on and I believe we will get there. Regarding the human resources aspect, I believe that every member of the NNPC staff today is proud to work for the Corporation. That was not the case when we came in about two years ago.

Q: Still on the subject of fuel distribution, within three months of your appointment as GMD, the long petrol queues disappeared

and fuel was available in virtually all filling stations around the country. Also, allocation of crude to the four refineries has been increased from 300,000 b/d to 445,000 b/d. Added to this was the massive increase in supply of petroleum products from 12m lt/d to about 27m lt/d within two years. The point is that petroleum products are sufficiently available, yet these long queues are creeping back. What really is the problem?

A: First let me address the issue of what we did to return to normalcy. What I did was to increase supply of products to a choking level. What do I mean by that? We all knew that was a lot of hoarding, smuggling and diversion of products. So I said, for example, if the facilities for hoarding hold 20m lt, put out 30m lt, and then you will over-supply the system.

Macroeconomic considerations

But in terms of macroeconomic considerations, it is not good for the nation. So that is really what has happened. In fact if you go to filling stations, even in Abuja here, you will see trucks. All those trucks are filled with products, the underground tanks are full. So there is nowhere else for the trucks to discharge their cargo. But you might still drive into the station in question and discover that even though the station has six or eight pumps, they may be selling from only one or two, so as to create that artificial scarcity. This problem itself is a chain. The NNPC does not have the marketing outlets, so it is very difficult to completely control the situation.

Q: What about the four refineries, are they able to process the additional crude, considering that none of them is operating at installed capacity?

A: In terms of the refineries, what you hear is that their allocation has been increased from 300,000 b/d to 445,000 b/d. Some of the refineries such as the one in Port Harcourt were commissioned in the 1960s. Now, the Warri refinery, for instance is supposed to process 125,000 b/d. It was originally built to handle 100,000 b/d, and debottlenecked to 125,000 b/d. But even at the time it was supposed to process 100,000 b/d, it could not handle that because there was a structural problem with the exchanger itself. However, when they debottlenecked, surprisingly the structural problem was not corrected. So the truth of the matter is that the Warri refinery today can only run at a maximum capacity of 80 per cent. For this problem to be rectified, there has to be a major intervention.

In Port Harcourt, there is the old refinery, which was debottlenecked to 60 per cent of installed capacity. At the time it was being built to handle 100,000 b/d, there was to be another new refinery in nearby Cross River State. However, the proposed Cross River refinery was abandoned, and instead a decision was taken by the government to increase the capacity of the new Port Harcourt refinery to 150,000 b/d. But again, the FCC was never expanded to take care of the additional processing capacity. So it will not be possible for the two Port Harcourt refineries to process their combined total of 210,000 b/d. However, we have been able to run 185,000 b/d, and I believe we can run up to 190,000 b/d combined output for the two refineries. All this adds up to about 80 per cent output for the two refineries.

‘We publish the reports of all our activities in the major newspapers so that everybody can see what we are doing.’

The Kaduna refinery up north has an installed capacity of 110,000 b/d. But here again, the supply system itself, which brings crude from Escravos in the southern part of the country, cannot handle the volume that will allow Kaduna to process 110,000 b/d. Even if the Kaduna refinery were to run at full capacity, the evacuation process of the fuel oil and so on cannot be fully achieved for such an inland refinery.

Although on paper it can be said that the four refineries are supposed to process 445,000 b/d, I have done a report on this to the Presidency saying, even if nobody has ever told you, I can tell you that this is how the situation is. And that has helped them. We have been able to process 330,000 b/d. And that is the highest level that all four refineries have ever produced. Understandably, the maximum objective was 300,000 b/d, but even that level had not been reached. But this year, the refineries have been doing between 228,000 b/d and 330,000 b/d, which is the peak of the output of the refineries. But having said that, assuming the refineries were working to capacity, the crude that they are allocated today will not meet the PMS demand of 27m lt/d.

Q: Why is that so?

A: The reason is the yield pattern which these refineries get. So you must still subsidize, by bringing some imports to supplement the local supply. However, you will have more than you require in kerosene as well as gas oil, which is diesel. And that is already happening today. In fact we are planning to start exporting the excess diesel, because some people are saying that they need it for their local consumption, whereas they simply export it. So we shall soon start exporting gas oil and use the revenue to offset some of our other operations. So regarding crude allocation to the four refineries, we process what we can, then export the rest and use the revenue strictly for importation of finished products and nothing more. The account for this process is separate and it is subject to auditing, because the present democratic government’s watchword is transparency and accountability. Since we started, we publish the reports of all our activities in the major newspapers so that everybody can see what we are doing.

Q: There is this talk about allowing private refineries to be built around the country, and I intend to have comments on that from the Special Adviser on Petroleum and Energy, Dr Lukman. Also, the NNPC is considering the establishment and running of fuel retail outlets nationwide. If these happen, how will they contribute towards the solution of the

main problem of distributing petroleum products around the country?

A: On the private refineries, before this civilian administration came into power, I think two licenses had been given, and recently, one license was given to the Akwa Ibom State government. As you have said, Dr Lukman will address the subject better, because a policy is being developed by government. But personally, I have my doubts whether anybody will come and establish a private refinery in a regulated market.

However, once they succeed in deregulating the market, then you can have private refineries, and when you have that, you can benchmark. Because today, never mind the inefficiencies that might exist in our system, but people are usually tempted to compare a refinery sited in Nigeria to one sited in Europe, for example. You know very well, that a refinery sited in Europe does not need to have its own power supply. In Nigeria, you are on your own. You provide your own power, your water, your housing and your security. But in spite of that, I believe that we can still do better. But it will be interesting to have a private refinery, so that we can use it to benchmark what we are doing.

Now, on the issue of the outlets, for an integrated oil and gas company, you must be all the way, in one form or the other. I have visited Venezuela's PDVSA, Norway's Statoil and so on, and we know how integrated they all are. Today in Nigeria, we must have a vehicle for intervention. When anything goes wrong with the fuel supply system, everybody says it is the NNPC. But if NNPC has its own fuel station outlets, it can tell everybody to go there because they will certainly find products.

In terms of business expansion itself, I can tell you that we won't go into it if it is not profitable. Today, we do not get subvention from the federal government. The point to be appreciated is that, the government will not fund the retail outlets for us. We are going to fund it. Therefore, we have to make it profitable. Also, when you deregulate, the government has a responsibility to the people, to the electorate. You cannot really leave the electorate and say to them, you are on your own. So if distributors decide to exploit them, and there is no vehicle for intervention, then they may be exposed.

As a matter of fact, in a deregulated market, you will have a stronger NNPC that will compete but that will also be a swing supplier for regulating the market. If you recall, when America felt that the price of crude was going too high, they released some stock from their strategic reserves, even though that may not have been the best option, but they did it. So, as we move further towards deregulation, the need for the NNPC to have these fuel outlets becomes more imperative. This is because the NNPC must be there to protect Nigerians. Otherwise, you may have marketers tomorrow saying we are going to sell a litre of petrol for 120 naira. So you either take it or leave it. But with the NNPC, you will have a price monitoring system. But for the system to be effective, you must have a swing supplier.

Q: During our tour of Port Harcourt, we learnt that the oil companies are resisting what they see as the NNPC's imposition on them of the various production-sharing contracts (PSCs). What are the problems?

A: Well, there was a tender, and interested parties responded, and at the end the winners were announced. Then of course, they were advised by the government to go and negotiate an agreement with the NNPC. That was the mandate, go and negotiate. And then there was no time that either the Ministry of Petroleum or the Special Adviser on Petroleum and Energy ever said, go and sign an already-negotiated agreement. The instruction was, go and negotiate. But in going out to tender, you had to put in a sample agreement of what was signed in 1993, and also, the Deep Water Decree, which is the existing law that contains all the available information.

In the course of negotiations, all that we were asking for was equity. And like I said, I do not condemn the companies. Before this government came to power, we

'Serious efforts are constantly being made to clean and sanitize the NNPC, because of the importance of the petroleum sector.'

were in a highly difficult environment. Therefore they had to negotiate hard. But what the oil companies were saying, was that the PSC agreement that some of them signed in 1993, should apply now. So really, there was nothing to discuss. The point is that the contractor invests his money, takes the risks, and when oil is discovered, after tax and royalties, he takes his oil for his cost. If there is some profit, it should be skewed towards the contractor, because he took the risk.

But what the contractor is asking for, is that he could take a loan and that the interest of that loan, should be capitalized and be made recoverable from the cost oil. And the NNPC's argument is that if it is done that way, it means it is the Corporation that is contributing that much, and not the contractor any more. We have said that every fund has a cost, that is why it is a PSC, and that is why the profit is skewed towards the companies.

Stability of law

The other issue the companies raised was the issue of the stability of law. Well, there is no country that does not change its law if that becomes absolutely necessary. We said that what we must provide for, is to protect them. If anything in the legislation affects the economics significantly, both of us must renegotiate, to ensure that there is equity. That was what we offered. Again the companies said they cannot provide us with indemnity, but we insisted on that. It is for gross misconduct of their personnel, but they said they will not do it. Another touchy subject was the split ratio of the profit of oil. I believe we were very generous, because we offered them 70 per cent while NNPC will take 30 per cent. But they said no, that we must go back to the 1993 arrangement, and we said, we cannot do that. Well, we have all the economics which show a fantastic rate of return. Negotiations are on with about seven companies, and when we conclude, I think we will have an industry that all of us will be proud of.

Q: We understand that the NNPC has entered into a contract with Ghana. What does that involve, and do you have arrangements with other African countries?

A: Well, it is a crude oil supply contract. We have similar supply contracts with South Africa, Kenya, India and Jamaica. Well, the oil is not free, it is paid for, and when one of them defaulted we imposed the appropriate penalty. It is business.

Q: Is the Nigerian Gas Company (NGC) a profitable subsidiary of the NNPC?

A: The NGC was born out of necessity. The Igbin and Delta power plants were being built, and there was the need to pipe gas to them. But at some point, I think in 1991, the operations were commercialized. By the time I left in 1998, the NGC had developed to a level whereby it was sending money to the corporate headquarters. That was what all the subsidiary companies were supposed to do, because they all operate on behalf of the corporate headquarters. It was more like the subsidiaries were leasing the facilities.

'Through NETCO, we shall go into alliances with reputable production companies, where all kinds of fabrications can start.'

In fact we have an integrated gas network, mostly in the south, and up north it ended at the massive Ajaokuta steel complex, and once the complex returns to life, the NGC will continue supplying Ajaokuta's gas needs. We supply gas to the Nigerian Fertilizer Company and Alscon. But also we have commercial customers such as the West African Portland Cement, PZ Industries in Lagos, and the Aba Industries.

At one point we took a strategic business decision to content ourselves with transmission and keep what we are already distributing. For further distribution, let us bring in private investors. You keep what you have so as to benchmark what you are doing. That is what we should have done even with the retail outlets for liquid products supplies, but that was not done. But in gas now we have some distribution outlets, so we are bringing in local private investors. That is why we have signed all the distribution contracts for the Ikeja area, with Gaslink. We have assigned what we used to handle in the Otta area to Shell Nigeria Gas. Even in Aba (in the eastern part of the country) we now only transmit the gas there, and the internal distribution has been contracted to Shell Nigeria Gas. They have all done very well.

Regarding the West Africa Gas Pipeline project, Shell Nigeria Gas is to form the bedrock, because the gas from Escravos is supposed to be transmitted by the NGC up to the Nigerian border, before it goes offshore heading for the West African subregion.

For the Nigerian Petroleum Development Company (NPDC), their production had been relatively low from their Eredo and other fields. However, in 1991, the fortunes of the NPDC turned around and skyrocketed. Also in the last bidding exercise, the company did a joint bid with Nigeria Agip Oil, for OPL 244, and they won it. In fact there are plans now to take NPDC outside Nigeria. It is one of the objectives of this management to give the company international exposure, God willing.

Q: Technical co-operation among the national oil companies of OPEC Member Countries seems to be minimal. Is the NNPC thinking along those lines?

A: Certainly we are looking a lot more into that important area. In fact that is part of our agenda, which was why I led a 13-man NNPC team last September, to PDVSA in Venezuela, to discuss areas of co-operation. Also, in the spirit of OPEC/non-OPEC cooperation, we have been to Norway's Statoil. So, efforts in that regard are on the front burner. I have tried to attend virtually all the seminars and conferences on local content. I believe this technical co-operation will come. We have an engineering and consultancy subsidiary company called NETCO. We expect that over time, through NETCO, we shall

go into alliances with reputable production companies, where all kinds of fabrications can start. Actually, the Caracas Declaration emphasized the need for that kind of co-operation.

Q: Various reports show that since you took charge as GMD, you have given the corporation a new sense of direction and enhanced its operational efficiency. Of course your new team played a significant part in your new drive for better services to the nation. What plans do you have for your most valuable asset, which is human resources?

A: I will start with remuneration. In terms of that, to be honest with you, I owe a lot to the staff. I have been with the NNPC for some time, and I believe there has not been the type of followership that I see today. We were changing a system for the better. So, for the staff also it was tough, but they went through it very well. Therefore, whatever success story we have today is because I have the good people.

It is said that a nation without a vision will perish. If you do not have the vision and the people, you cannot go further. Of course I will continue to do my best to strengthen our human resources base. But to offer to staff out of sentiment what I cannot sustain, I believe will be wrong, and of course, I will not do that. It has to do with sincerity. Therefore, during the collective bargaining that takes place every two years, between the staff and NNPC, I was asked by the management team to give a mandate. I said, what does that mean? They replied that I should decide what should be given as salary increase.

I said, I can only decide on that if it was my personal business. But this is our Corporation. If we publish the Corporation's accounts for public consumption, the staff should know that if the Corporation has done well, like I have said with all sincerity, it is the staff that have made it possible. In that case, they could say, look, we have put in so much, there is no reason why we should not share in the profits. We were discussing PSCs and saying, after taking out the costs, you share the profit. It is exactly the same principle. So, I told them I had no right to give any mandate regarding salary increases.

Business performance

Let the staff get the Group Executive Director, Finance and Accounts, to run through with them, how the business has performed. At the end of such an exercise, the staff should then be able to suggest how much we can afford. This is because, when the staff are working and putting in so much effort, they should know that when they do well and the company does well, there is something they can look forward to.

So, I will like to do the very best for the staff, because, they have given me the type of followership that I have never seen before. But I have also dedicated myself full time. I have gotten support from everybody including the President, and the Vice-President, who in fact help me to do my job. Of course there is the Special Adviser on Petroleum and Energy, who is also Chairman of the NNPC Board. In all, I have a firebrand board that is not a sleeping one. I can assure you that the board members are fully committed to developing the Corporation. And of course, having reached the peak of my career, for me it is not employment anymore. It is service to the nation.

Q: What is the staff strength of the NNPC?

A: We are over 14,000. But also I want to add that we have been a lucky administration. This is because in 1998 total revenue from sale of crude oil was just over $4 billion. However, in 2000, it was in excess of $9bn.

When we came in about two years ago, proven oil reserves were 25bn b. Today, they are 27.6bn b. So, it has been success story. The public perception is that when there is artificial scarcity of crude, we are blamed, but we shall all continue to do our best for the country.

Q: GMD, thank you for this interview.

A: Thank you very much.

PROFILE OF NPDC

The Nigerian Petroleum Development Company:

a domestic firm making an upstream impact

Dr Edmund Ayoola, the Managing Director of NPDC

The Nigerian Petroleum Development Company (NPDC) is the only subsidiary of the NNPC empowered by law to go into oil exploration and production. The company has been vigorously pursuing its mandate by engaging in exploration activities either alone or with joint venture partners.

In a sense, talking about the NPDC is like talking about its parent company, the NNPC itself. This is because the NNPC started as the Nigerian National Oil Company (NNOC) in 1972. The NNOC then was set up in response to OPEC's decision for Member Countries to establish their own National Oil Companies.

The NNOC was supposed to be an oil-prospecting company. Twenty-four staff were recruited in 1972, and sent for training in oil exploration and production in France. Later, as part of the efforts of promoting closer working relationships between OPEC Member Countries, the staff did work attachment in Algeria. That was the core of the NNOC in 1972.

In 1975, the NNPC was formed when an arm of the Petroleum Inspectorate Department was merged with the NNOC. Of course, the NNPC still maintained that same core objective of conducting exploration and production (E&P) activities. During that period, between 1975 and 1988, when subsidiary companies were carved out from the NNPC, E&P activities were being carried out by the E&P Division of the NNPC.

Elaborating on the above information, the Managing Director of the Benin City-based NPDC, Dr Edmund O Ayoola, explained: "That was a remarkable period, because during that time, the E&P Division, the forerunner of the NPDC, already had over one billion barrels of oil reserves.

"Shortly after that, the government, in its wisdom, decided to give those choice acreages where we had those oil reserves, to the multinational companies.

"It is on record that some of the giant fields that are now being produced by the competitors of the NPDC were discovered by the NNPC. Fields where they are producing well over 100,000 barrels/day were our fields which they renamed," said Dr Ayoola.

Consequently, according to available data, by 1995 the NPDC had less than 240 million barrels of oil reserves left to its credit.

Currently, the company has three producing fields. One is the Agura field, which is producing 5,000 b/d. This was a field where the government took over the operatorship from Mobil, Teneco, Sunray and other producers. Then there is the Oredo field, which in fact was the first onshore oil field that the NPDC discovered, just about 15 minutes drive from Benin City. The significant point is that the Oredo field was discovered in an area which one of the biggest multinational oil companies had written off as a no-go or reject area. But the government allocated the area to the NPDC, which took up the challenge and eventually discovered the Oredo field. The company is very proud of its achievement in finding a significant quantity of oil in an area which a multinational com-

pany wrote off, as there was no hope of finding any oil.

The third field, named Ozende, will soon go into operation with an initial output of 4,000 b/d and the prospect of increasing that volume. This has proved that as an indigenous outfit, the NPDC possesses the technical capabilities to perform and deliver the goods.

It has been said that before now that budgetary constraints have hindered the progress of the NPDC. The Nigerian government had refused the NPDC the right to develop the discovered offshore oil fields which contained the greater part of the 1.4bn b of reserves. If the NPDC had been allowed to developed these fields, it would probably have been the only indigenous company that would have developed in leaps and bounds, to the extent that the government in its wisdom, could have nominated it as the operator of the joint ventures that the multinational oil companies are now operating.

Dr Ayoola commented: "Presently, the NPDC still has one of the offshore acreages left which has now been converted to an OML status. It was OPL 91 before, but now it has become OML 119. That is the only offshore acreage that we have. In it, 20 years ago, we discovered two oil fields, named Okoho and Okono, respectively.

"With the advent of democratic rule in the country, and against the backdrop of budgetary constraints, we came up with the strategy of seeking partners with whom to operate these two fields. Specifically, we looked for a partner or partners that can finance the project, while we work the fields together," Dr Ayoola noted.

He explained that after adverts were published in the international press, bids were tendered by interested parties, and following a shortlisting of the companies, Agip Energy & Natural Resources Company won the bid. As a result, the NPDC is jointly operating the field with them.

Although this is a service contract, it has peculiar conditions in that the partner will bring in the funds, while the field will be jointly operated with the NPDC. For example, Agip will provide the head of the joint operating team for the first three years, after which the NPDC will take over that function, and in five years, the NPDC will become the sole operator of the entire project.

Dr Ayoola went on: "We have already started that arrangement. Currently, 12 of my staff are working with 12 Agip staff in developing these fields. We have drilled the first well and it is extremely successful. I will not be able to give you the details now, because my management has not been fully briefed yet.

"We consider this arrangement with Agip as a test case, because it is the first time such a scheme is being done in Nigeria. So far, it has been very good, and we do not see any reason why it will not be an outstanding success."

Indications are that the NPDC hopes to use the same strategy to work on the company's OML 64 and OML 66. These are onshore acreages that strongly promise quite a number of oil discoveries.

Open bidding exercise

The company also has another arrangement with Agip. In the last open bidding exercise that the government did, because of the NPDC's peculiar situation, it could not bid on its own because it lacked the funds to pay the signature bonus. In order not to miss out on that bid, the company approached two oil majors, because the law allowed that.

Thus a joint bid was made with Agip Energy, which is the exploration subsidiary of Agip (and not Agip Resources). Fortunately, OPL 244 was won. In that arrangement, the NPDC has 12.5 per cent equity. This level of interest will enable Agip Energy to carry the NPDC through the exploration and production stages. However, it has been agreed that when the production stage is reached, the NPDC's equity shall increase by eight per cent, taking it to 20.5 per cent.

Regarding the issue of operatorship, the arrangement is that the NPDC will supply technical staff proportionate to its equity. In other words, if there are 100 technical staff, 20 shall be contributed by the NPDC. However, in future arrangements, rather than have a joint operatorship, the NPDC would prefer to be the sole operator. This is because the company so far has acquired and is strengthening its expertise in offshore operations. Speaking about the NPDC's vision, Dr Ayoola emphasised: "Our vision is to be able to produce at least what the nation will require in terms of its internal consumption for refining. We hope that with what we have, in the very near future, we shall get to the level of about 350,000 b/d."

Throughout my discussions at the NNPC and its subsidiary companies which I visited, the issue of funding always surfaced. Although funding was of course provided in support of various projects, it was almost always never sufficient. This problem is not peculiar to Nigeria as it is generally, a worldwide phenomenon.

All the same, given the fact that the NPDC has good quantities of oil and gas in the ground, and given the excellent opportunities for development that the company has, one would have thought that it could raise funds from the capital market to support the execution of its huge projects.

According to Dr Ayoola: "Regarding the issue of funding, really there is nowhere in the world where a company has all the funds that it needs to operate. When you have your proven oil reserves as in the case of the NPDC, that is as good as cash, because it is good security.

"For the NPDC to source funds from the open market, we may eventually get there some day. But for now, the NPDC is not capitalised, and it cannot move in that direction."

The NPDC is seriously pursuing its technical co-operation strategy both locally and internationally, so as to enhance its technical expertise. The company is finalising arrangements with its partner Agip for both of them to go to Equatorial Guinea and work on an oil block concession which Agip has won.

Although the NPDC has been concentrating on oil exploration and production, that is changing. As Dr Ayoola explained, "Really, the Nigerian Delta area, in our own technological term, is a gas province with some oil.

"The point is that, with the LNG trains steadily coming on stream, and given global environmental concerns, when you make a gas discovery now, you do not write it off as some kind of nuisance, like used to happen in the past. So, the NPDC is on course and we shall continue to build on our strength in both sectors."

The NPDC is thus dedicated to becoming a significant participant in oil and gas exploration and production both on and offshore in Nigeria.

Integrated Data Services Ltd:
leading the search for oil and gas

Engineer A L Yar'adua, the Managing Director of IDSL

Integrated Data Services Ltd (IDSL) is a forefront, integrated geophysical and geological engineering company geared towards the oil and gas industry.

IDSL was set up in 1987-88 as an NNPC subsidiary charged with conducting seismic surveys and data processing. The seismic operation involves soil investigation in an allocated block. The main aim is to identify any reservoirs and determine where hydrocarbons and gas exist, after which the tapes are sent for the data to be processed and synthesized in order to obtain a total picture of the block under investigation.

Realising the importance of their role, IDSL engineers are fully dedicated to always doing a thorough and competent job. Speaking about the activities of his various teams, IDSL Managing Director, Engineer A L Yar'adua, said: "Basically, there are two crews, one of which has been working with Shell over the last three years.

"The other crew has been working in the Port Harcourt, Ilele zone, and very soon this crew will move to the neighbouring areas. Then we have another party which has just completed a job for the NPDC and is mobilising to carry out another important assignment for the same subsidiary around the Benin zone."

In the fourth quarter of this year, it is understood that IDSL will carry out a key job for the Nigerian Agip Oil Company, in a land area covering 620 square kilometres. Altogether, for the Shell and Agip jobs, IDSL shall be covering about 1,300 sq km, which represents more than 70 per cent of the company's seismic activities.

In order to keep pace with modern technological developments, IDSL has a large, modern and sophisticated processing centre in Port Harcourt, which is very busy processing seismic data most of the time. In fact, plans are afoot to upgrade the centre, which was commissioned in June 2000. This would enable IDSL to keep pace with advancement in its area of activity, as well as position it to handle the projected large volume of jobs that would come its way.

As we all know, the oil industry is vast and highly sophisticated, competition is intensifying, and there are plenty of op-

portunities. Engineer Yar'adua sees IDSL growing from strength to strength. Last year the company operated one crew which achieved about 78 per cent of targeted revenue. This year, however, two crews are being run, and expectations are very strong that the company will surpass its 100 per cent targeted revenue.

Apart from revenue generation, IDSL is also executing the policy of capacity-building. Engineer Yar'adua noted: "A lot of the NNPC staff or other Nigerians who enter the oil and gas industry need rudimentary training regarding how oil is got. What are the activities involved? People just see crude oil being sold, but they scarcely know the processes that lead to the exploration and exploitation of this natural resource."

Therefore, he continued, IDSL trains — among others — a lot of staff from the National Petroleum Investment Management Services (NAPIMS), Shell and Chevron, on the broad activities in the exploration chain.

One of the key arms of IDSL is the Department of Reservoir Engineering, where a lot of money is being invested to make it even better.

"We are upgrading the Department in the firm belief that there are plenty of opportunities in Nigeria and these are growing. Of course, there are some geoscience companies in Nigeria, but when we give them the contracts they send the jobs overseas," said Engineer Yar'adua.

"Certainly, the Department of Reservoir Engineering has been very functional. What we intend to do is to put new equipment and more powerful computers which would increase the precision and turnaround of our activities."

Another important Department which IDSL is presently formulating is Data Storage and Management. A lot of the seismic data and processed tapes need to be stored in a very conducive place. This is because, apart from reviewing the data from time to time, IDSL could even sell some of it to companies that want to carry out exploration activities around the relevant areas.

It is instructive to note that, for several decades until recently, all seismic activities have been done overseas. It was confirmed that the Nigerian government pays about $20 million annually just to keep these data abroad.

"We believe," explained Engineer Yar'adua, "that for obvious reasons, such data should be kept in Nigeria. In fact, we have already received some important tapes for storage from NAPIMS, the NPDC and Agip. We are of the strong view that for technical and strategic reasons, this is an area in which we should invest seriously, and we are on that already.

"In fact our action tallies with an existing law, which gives the Department of Petroleum Resources (in the Ministry of Petroleum) the authority to take these data from the oil companies and store them in a Nigerian data bank. I am happy to say that we have been discussing this important subject with the DPR and a lot of progress has been made."

'One of our main intentions is to develop IDSL to be the core company that carries out seismic activities in the West Africa zone.'

Already, the federal government has allocated $2.2 million for the take-off of the Data Storage and Management project. The idea is to establish a data storage facility within IDSL in its Benin headquarters, and another one in Lagos. This is because most of the oil companies are based in Lagos and also Port Harcourt.

According to the Managing Director, 100 per cent of IDSL permanent staff are all Nigerians who carry out all of the company's core functions, namely: seismic activities, processing, reservoir engineering, and data storage and management.

As this is a dynamic hi-tech industry, in areas where IDSL believes it has some deficiencies, it enters into joint venture agreements with qualified expatriates. For example, regarding activities in the area of reservoir engineering, IDSL is in a joint venture with GeoQuest, who have their own model, which is among the best in the world. There is also the Landmark Graphics Corporation, which is in geophysical engineering, with its own very good model.

Good understanding

However, when jobs are sent to these companies, IDSL Nigerian staff go there and carry out the hands-on tasks, with some supervision by the expatriates. That way, IDSL has a good understanding with both firms, and this has been promoting mutual benefit, technologically.

Although it would seem that IDSL has its hands full, the company has already started extending its services within the West Africa sub region.

For instance, in the 1990s, IDSL had some successful activity in Ghana, based on the 2D technology in use at that time. However, the company has since gone beyond that technology, as it now employs the 3D technique. The Ghanaian authorities, with whom IDSL has maintained contact, were reportedly quite happy with the company's efforts.

Recently, the Gambia approached IDSL regarding its seismic services, and discussions are going on. Yet another West African country that may soon enjoy the services of IDSL is Senegal.

"One of our main intentions," said Engineer Yar'adua, "is to develop IDSL to be the core company that carries out seismic activities in the West Africa zone. We are also going into partnership regarding swamp and deep-sea seismic activities.

"Presently, we are getting into an arrangement with Petroleum Geo-Services (PGS) which recently did some seismic shootings around Nigerian waters.

"We have a joint agreement whereby our IDSL staff will be on board PGS vessels, and accompany them for the next two years, to any part of the world where they will be doing seismic shootings. Initially, the first year will be for training, and after that, our staff will take full part in the hands-on seismic activities."

The idea, explained Yar'adua, is to build a solid chain of crews, so that in say, ten years time, Nigeria should have a compliment of many crews whose members are highly experienced in deep-water offshore seismic activities.

The Pipelines & Products Marketing Co:
transporting petroleum to Nigerians

The PPMC's Managing Director, Dan M Nzelu

According to the Managing Director of the Pipelines & Products Marketing Co (PPMC), Engineer Dan M Nzelu, "It is the responsibility of the PPMC to transport crude oil to the four refineries in the country, namely in Warri, Kaduna and two in Port Harcourt.

"The transportation is done through pipelines from the production areas of Shell, Chevron, and all the other companies that produce the crude. Also, it is the PPMC's responsibility to evacuate the refined products from the refineries using the pipeline network or coastal vessels," he explained.

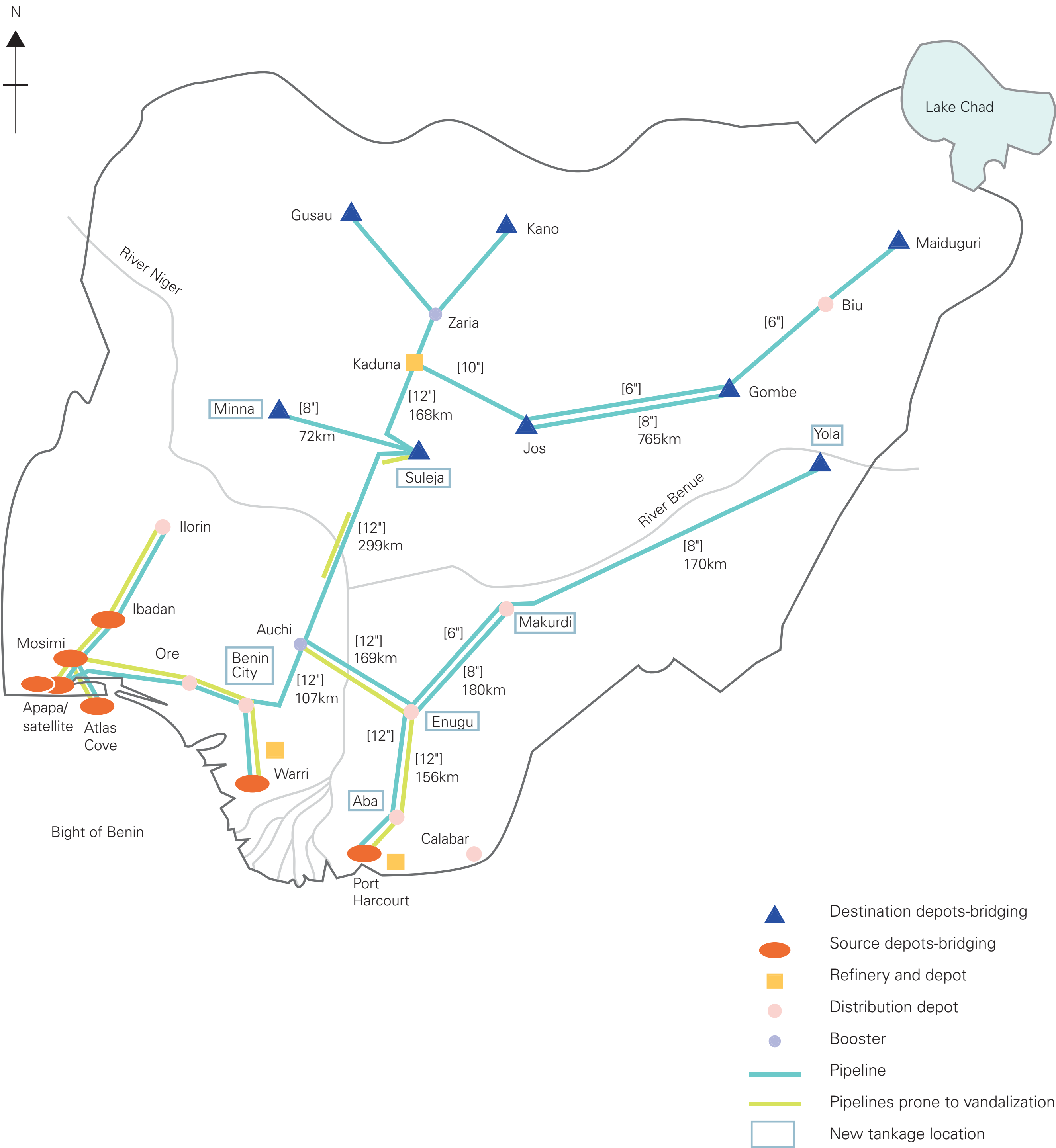
The products are first moved to the company's depots around the country, from where they are dispensed to the major marketers such as Total, Shell, National, Mobil, Texaco, Agip and the others, including the independent marketers. The PPMC also sells special products such as fuel oil, bitumen, waxes and so on.

'There has certainly been a significant improvement since the present democratic Administration came into office.'

The PPMC tries to carry out its operations safely and at minimal cost around the country, through a network of 5,001 km of multi-product pipelines, 22 storage depots, 24 pumping stations, nine liquefied petroleum gas depots, plus an associated array of equipment such as generators, distribution network and so on.

In carrying out its duties, the PPMC depends on other important participants in the refining, transportation and distribution chain of petroleum products. One such key player is the National Electric Power Authority (NEPA). However, because NEPA cannot guarantee electricity

Nigeria's product pipeline network



supply at all times, the PPMC operates its own power generators. Also, because the PPMC brings in vessels carrying imported petroleum products, the company pays port duties to the Nigerian Port Authority, and import duties to the Department of Customs and Excise.

Another part of the chain that the PPMC must go through is the Department of Petroleum Resources (DPR). These are the inspectors of the petroleum industry in Nigeria. It is the responsibility of the DPR to monitor all players in the petroleum industry, to ensure that the rules and specifications of marketing petroleum products in the country are observed.

Monitoring activities

As if the chain is not long enough, there are also the task forces that were inherited from the last military regime in 1999. These task forces monitor activities at the jetties, as well as the movement of vessels as they arrive and leave the country. Towards the end of the distribution chain are the numerous retailers who dispense the PPMC's products. Finally, there are the transporters consisting of tanker drivers who collect petroleum products from the depots and deliver to either independent or major marketers, as the case may be.

However, the flow of petroleum products around the country is not as simple or as smooth as it seems. Many have wondered why Africa's largest oil producer should be experiencing queues at petrol stations around the country lasting for several days and at times weeks. The problem was very pronounced during the military era. Although the problem rears its head once in a while, there has certainly been a significant improvement since the present democratic administration came into office, and efforts have been intensified to eliminate the hardship entirely.

As far as the PPMC is concerned, its business ends at the depot, once the transporter collects the product. The problem arises because the PPMC's pipelines are vandalized now and then, and so at times it is compelled to depend on fleets of tankers to move the products. Consequently, problems emanate which are beyond the control of the PPMC, because these tankers have to move the products to different points thousands of kilometres around the country.

Although the PPMC's pipelines are buried one metre deep, some people dig into the ground, break the pipes and take the products. Engineer Nzelu explained that in the last one year: "We have been trying to control such illegal activity, and we have succeeded in bringing the problem to a comfortable level, because we can now use our pipelines more easily. We will continue to tackle this problem with the seriousness it deserves, until it is totally eliminated. Part of our control measures include the installation of electronic gadgets, and the use of armed patrols along the right of way to discourage vandals from breaking our pipelines."

'We intend to keep maintaining our existing infrastructure, and update it whenever necessary.'

The task for the PPMC has been made more challenging in view of the steep jump in the volume of products which it has to distribute around a large country like Nigeria. For example, in mid-1999 when Engineer Nzelu assumed duty as chief executive, the PPMC was moving between 12 million and 15m litres/day around the country. By the middle of this year, the volume had climbed to between 25m and 30m lt/d. Ordinarily, this is a reflection of economic activities.

Said Engineer Nzelu: "From whatever angle you look at it, we consider it as growth, the fact that within two years, demand for petroleum products has doubled. Many people own cars. Some people buy twice the quantity they used to consume, because they may be driving back and forth to look for business. So, economic activities are on the increase, otherwise the demand would not have shot up the way it has."

Basically, for the products that it markets, the PPMC depends on the four refineries. But where the refineries are unable to meet the company's demand, it always imports the shortfall. The four refineries are coming back on, because their combined production in the past six months has been more than 10m lt/d. Before then, they hardly produced more than 5m lt/d. Thus, plenty of products are now coming from the refineries.

Enhancing distribution

It was explained that based on that, and by the time the bigger Port Harcourt refinery and that of Kaduna fully bounce back, PPMC projects that its imports of refined petroleum products would be significantly reduced, while distribution within the country would be more enhanced. This is because with the Kaduna refinery in the northern part of the country fully back on stream, there will be no need to move huge volumes of products by trucks. Therefore, the problems of the tanker drivers would be drastically reduced.

Regarding the increase in consumption of petroleum products in the country, Engineer Nzelu said he did not think that this would keep doubling as we have seen in the last two years.

"Instead," he added, "we project an annual consumption increase of about 10 per cent. We intend to keep maintaining our existing infrastructure, and update it whenever necessary so as to cope with future challenges and opportunities."

Nigeria's oil refineries:

striving towards self-sufficiency

PHRC's Managing Director, Engineer Basil Idahosa

Part of the refinery complex at Port Harcourt

In order to make Nigeria self-sufficient in petroleum products, the Nigerian National Petroleum Corporation (NNPC) took over the Shell refinery that was established in Port Harcourt in 1965.

As the nation's consumption increased, the Corporation, between 1978 and 1989, constructed refineries in Warri, Kaduna and Port Harcourt to bring the number of refineries to four. The refineries are among the NNPC's wholly-owned subsidiaries.

The Kaduna Refining and Petrochemicals Company processes crude oil into refined petroleum products and manufactures linear alkyl benzene, tins and drums for domestic consumption and export.

Like its Kaduna counterpart, the mission of the Warri Refining and Petrochemicals Company is to efficiently and profitably process crude oil into petroleum products.

It also aims to manufacture and market petrochemical products through effective resource utilization while exploiting new business opportunities.

The Port Harcourt Refining Company (PHRC) is actually a two-in-one setup. The sprawling premises are home to the NNPC's older 60,000 b/d refinery and the newer one, which has a capacity of 110,000 b/d.

The PHRC is in business to provide efficient petroleum refining services primarily to the nation, at a minimum cost, and to the international market at competitive prices. Also, the company's mandate includes the spearheading of the development and production of specialised petroleum products.

The combined capacity of the four refineries is 430,000 b/d. However, since the refineries have been neglected for about seven years, they have been producing at less than 50 per cent of their installed capacity.

In the interview beginning on page 16, the Group Managing Director of the NNPC sheds some light on the problems of the refineries. Suffice it to say that, since the advent of the present elected government two years ago, systematic efforts are being implemented to bring the refineries fully back on track.

Research and Development Division: driven by innovation and quality

In the NNPC's resolve to have a research centre that will cater for its growing technological needs, as well as those of the entire Nigerian petroleum sector, a Research and Development Division (RDD) was established in 1979, with its headquarters in Port Harcourt, the capital of oil-producing Rivers State.

Additionally, the RDD was set up to become a world class petroleum research centre that is driven by innovation and quality in carrying out research, development of technology and the provision of services to the oil and gas industry.

The RDD's Group General Manager, Alhaji Isa Yusuf, explained it thus: "In today's globally competitive business environment, no industry can operate efficiently and profitably without modernization and upgrading of its processes, products and services.

"The ability to do this rests squarely on the industry's R&D capabilities, which in our case include the development of indigenous and technical services of international competence, provision of global competitiveness for the NNPC's corporate business in both products and processes, and the enhancement of technological innovations for NNPC operations."

The RDD's Group General Manager, Alhaji Isa Yusuf

Current efforts by the RDD are geared towards achieving capabilities in core analysis, reservoir engineering, crude oil assay and evaluation, as well as process technology. The division also focuses its attention on corrosion studies, petroleum geochemistry and geophysics, bio-stratigraphy and sedimentology, basin analysis, petroleum product analysis and evaluation, water and instrumental analysis, and quite importantly, environmental research and services.

Although the RDD is expected to give top quality performance in all spheres of its operations, the Division is facing serious funding problems. For example, it is currently located on a temporary site, which according to the staff, is not a conducive environment for meaningful research work. However, it is understood that efforts are on going to build a permanent research centre in Port Harcourt, with the support of France's Beicip-Franlab as consultants.

Another problem which slows down the RDD's research work is the inadequacy of the equipment and some laboratory facilities. The RDD's professional staff are very experienced and dedicated to duty. However, they are relatively too few in number and have to make do with the shouldering of a very heavy work burden. For example, the Division's manpower has not grown over the past ten years. It was estimated that by now, the RDD should have 940 research scientists and engineers. The current figure for that category of professionals is only 50.

As the RDD lacks the funds to carry out its developmental projects, the Division undertook an analysis of the technical requirements of the Nigerian petroleum industry and determined the areas that need further development.

In pursuance of this objective, the RDD is arranging to go into collaborative work with Venezuela's PDVSA. The take-off of the scheme will be a demonstration of technological co-operation between OPEC Member Countries. Alhaji Isa is optimistic that this kind of co-operation will be expanded and strengthened.

Discussions are said to be on for collaborative work with the research centres of some international petroleum companies. Also, the RDD is working on plans to collaborate with UNIDO to establish in Port Harcourt, a catalysis research and development facility.

Its funding constraints notwithstanding, the RDD is vigorously engaged in fuels and lubricants research, which includes mixed catalytic cracking of petroleum products over hyper-active zeolites, modes of selective hydrogenation of pyrolysis, gasoline-naphtha mixtures, and production of lubricant base oils utilizing Nigerian crude stocks.

According to the Group General Manager, the RDD has submitted proposals to the NNPC refinery in Warri, to study the carbon black and polypropylene plants so as to regrade the off-specification products for value added products.

In spite of the shortage of funds, the RDD is upgrading its core analysis laboratory. It is hoped that when the equipment

and other facilities are fully installed in 2002, the Division will be in a better position to compete for all core analysis jobs.

Also, as soon as the drilling mud laboratory is fully established, it would, among other functions, carry out research in drilling mud formulation using locally-sourced raw materials. It will also analyze spent fluids from oil fields with a view to establishing their impact on the environment.

The RDD lends plenty of weight to its environmental research efforts. The environmental section has four key units, which are waste management, toxicology, atmospheric air pollution and environmental biology, each of which is engaged in a number of research activities, such as bioremediation, product quality tests, 90-hour chronic toxicity tests, and characterization of flora and fauna in the environment.

Environmental analysis

The Division, through its interdisciplinary projects, is also engaged in baseline studies, environmental impact analysis, pollution prevention, control and remediation studies, and assessment of environmental quality through PAH analysis.

It would appear that the RDD's main problem is not the funds that are allocated to it *per se*. Rather, it is the lengthy and time-consuming processes that have to be followed before the funds are committed to planned projects.

According to the Group General Manager, "Right now, quite honestly, we could not utilize the money that is released to us. We are in fact investing it. This is because there are limits of authority to commit expenditure and to spend.

"So when the expenditure is beyond our limit, then it has to be sent to the head office through the group executive committee, to a board committee, then to the main board, and finally to the executive council of the federal government. It is after a decision at this highest level that the subject will return to us."

As could be imagined, time flies and the situation becomes more complicated. As far as the RDD is concerned, the issue of funding is really in inverted commas, because economists and financial experts say that money is as only good as the piece of paper it is printed on, unless and until it is put to use. So, one could have money and at the same time have no money.

However, the situation is said to have improved significantly. The main problem would appear to be that of a decision to commit the funds to approved projects. It is believed that these problems could be best solved through the implementation of a master plan for the Division, which is being put together. Unless that is done, explained Alhaji Isa, the new RDD site may not come into fruition early enough.

"Consequently," he continued, "we have to see how best we can use the available space that we have here, so as to continue providing our services, such as characterization of the different crude oil and their potential yields when refined. We shall also continue to do core analysis, KBK analysis, so as to determine from the soil sample, whether any hydrocarbon exists in the first place and if so, in what quantity."

Sometimes, the RDD correlates its data with those of Integrated Data Services Ltd, another NNPC subsidiary. Hitherto, a lot of these services were being obtained abroad. However, it was observed that on the basis of ongoing strategies and efforts, the RDD is geared to providing many of these services, especially with the support of laboratories from private companies and the Department of Petroleum Resources. In that respect, it would be fair to say that the RDD has achieved a great measure of success, even though the staff strongly believes that the Division can do a lot more.

The RDD generates some revenue by charging for jobs it does for joint venture oil companies, private consultants that work for oil companies, the Nigerian police, and the NNPC itself.

On the subject of indigenous technology, the RDD has practically solved many problems that some companies in the petroleum industry have been experiencing. Apart from the numerous technical problems which the Division has solved, it is currently working on a number of other issues.

For example, following complaints by customers that some of the plastic chairs produced by the Eleme Petrochemical Company Ltd (EPCL) are not as strong as they should be, the firm has asked the RDD to help identify and solve the problem. The Division is working on another EPCL assignment, which involves the development of local materials for the production of resins of different colours.

The RDD is also handling a job for the upstream arm of the Commercial and Investments Directorate of the NNPC. Specifically, RDD is looking into some raw materials for the Directorate's drilling activities, which they now import. The materials are said to exist locally around Nigeria. Already, the RDD is conducting the analysis of the local raw material, to see what the possibilities could be.

Thus, the RDD is involved in these and other areas in which it is taking the research and development initiative. It is also making commendable efforts in the area of applied research. For instance, it is looking into the methods and chemicals that it uses with a view to improving the efficiency of the system. The RDD is doing this in its laboratory through analogy balance, materials balance, and so on. According to the Group General Manager, the main problem has been the winning of the understanding and co-operation of the operating CPUs.

"Certainly, we are not doing these research and development efforts in order to expose the inadequacies of anybody. Actually, our duty is to support and assist them," Alhaji Isa explained.

"I am happy to say that, while in the past the trend had been distrust and at times even antagonism, the CPUs are now coming forward and are more receptive to the RDD's professional results and helpful recommendations," he added.

As part of its functions, the RDD constantly carries out research and gives assistance in the area of environmental impact, especially in the petroleum sector. In keeping with the international standard of what should be the minimum and maximum levels of different gases that are emitted by factories, the RDD carries out tests to determine the baseline of what the ambient air condition is in any selected factory.

The results are compared to the international standard guideline to establish the deviation factor, if any. If the level is high, the RDD recommends what should be done to bring it down. Usually, these tests take a few days. However, they are done in different locations, at different times and in different seasons around the country each year.

Group Human Resources Development Dept:
committed to achieving excellence

A large company such as the Nigerian National Petroleum Corporation (NNPC) may have some of the machinery and tools with which to execute its mandate. However, at the end of the day, it is the quality of its human resources in terms of their training, experience and commitment that would largely determine whether or not the set objectives can be achieved.

In recognition of this important requirement, some years ago the NNPC established the College of Petroleum Studies in Kaduna. In July 2000, the NNPC management brought the Institute under the Group Human Resources Development Department (GHRDD).

As a result of the merger, explained the General Manager, C A Maduka, a new organogram has been submitted for NNPC management consideration. Of course, the support and commitment of top management is very important.

"We all know," he continued, "that in Nigeria in some of these areas, we are a bit behind. For example if you go to other oil-producing developing nations such as Venezuela, Malaysia and so on, you will see that they have very well-equipped training centres.

Adequate manpower

"In some cases, these training centres operate independently of the main body, in terms of generating their own income. In our own case, it may not be absolutely necessary. However, if they want our training centre to develop along those lines, then they will need to give us the adequate tools and manpower with which to achieve the desired results."

The GHRDD operates in two separate locations. The first is the corporate training centre at Mosimi, a fairly busy centre for petroleum products movement, near Lagos. It is the NNPC's aim to develop the Mosimi centre into a technical training centre. The second is the Kaduna centre, located around the middle of the country. The plan is for this training arm to be developed into a management development centre.

The Division, explained Maduka, is involved in many activities that are aimed at strengthening the human resource base of the entire NNPC. These include competency mapping or profiling, streamlining of on-the-job training, and succession planning which is really the engine of human resource development for the Corporation.

The GHRDD has a very adequate and comprehensive career development plan which it has been using on a year-to-year basis to develop people. For example, over a thousand jobs in NNPC have core skills which the staff must have. The GHRDD has identified these and the kind of training programmes which they need to acquire.

The training schemes are operated on five levels. For example, if a staff member has just been posted to a particular job at entry level, it is calculated that in two to three years, he or she will be at that level acquiring the basic knowledge or skills, to be able to perform well.

In the fourth and fifth years, the staff member is expected to be performing at intermediate level. In the sixth and seventh years, they are beginning to be recognised as competent, on the basis of the numerous training programmes undergone in the previous years. It is then expected that between seven and ten years, the staff member should be an authority on the particular job he or she has been doing.

"But even as an authority on your job," explained Maduka, "we begin to give the staff advanced training in preparation for the higher level of responsibility that he or she may be assigned. And we have been doing this successfully since 1991."

Furthermore, in the various divisions of the NNPC and its subsidiaries, the GHRDD continuously identifies talented staff, who are then trained, so they can become internal consultants. Having identified these talents, the GHRDD then liaises with its clients to know their exact training needs.

Additionally, all feedback is analyzed to see how best the reactions can be used to improve the activities of the Corporation. Another important plan which the GHRDD is pursuing is that of having a very good training data bank. This is partly done by significantly improving on what already exists.

In other areas, GHRDD organizes *ad hoc* training for NNPC staff. However, this is complementary to the career development plan which is already in place. Accordingly, the NNPC's training policy seems to be very comprehensive.

"The Corporation's career-based training is well organized, and for every person, we know exactly the type of training they should be undergoing, and we work towards that," Maduka explained.

The GHRDD closely monitors and evaluates the impact of the training it gives to staff (whether it is in the classroom or hands-on) as well as providing up-to-date training information.

According to its General Manager, the GHRDD's vision is to be a world class human resources outfit of choice, in the oil and gas industry, particularly in Nigeria. Its mission within the NNPC is to provide comprehensive management development and training services that will help the Corporation's managers and staff to grow and achieve excellence in their performance.

Other objectives include the continuous development of in-house competencies so as to offer consultancy services to Nigeria's petroleum industry in the short term, and outside the country in the longer term.

In order to pursue these goals, the GHRDD needs well-equipped training centres in terms of simulators, communication gadgets, and so on, both in Kaduna and Mosimi. The Division also needs to have a competent in-house faculty that is supported by adequate curricula.

The Nigerian Gas Company:
harnessing a clean energy source

*The Managing Director of the Nigerian Gas Company, **E A Olukoga** (pictured here), discusses the utilization of Nigeria's under-valued gas resources with the OPEC Bulletin's Editor-in-Chief, **Farouk U Muhammed, mni**.*

Question: It is acknowledged that gas is an environmentally-friendly energy source. In Nigeria, most of the gas has been flared until recently. However, now it is being harnessed and marketed. By so doing, you are helping the environment. Why was the Nigerian Gas Company (NGC) established and how does it operate?

Answer: The NGC is a wholly-owned subsidiary of the NNPC. The NGC was established in 1988 and is based in Warri, Delta State. Actually, it evolved from the then Gas Division, which in that year became a limited liability company.

The NGC now has a ten-member board, which includes three Executive Directors. The board reports to corporate headquarters, through the Group Executive Director, Exploration and Production.

Our main function is the efficient gathering, treating, transmission and marketing of Nigeria's natural gas and its by-products to major industrial and utility gas distribution companies in Nigeria and neighbouring countries. The gas is piped through pipelines and other distribution systems at a price that will yield optimum return on invested capital.

Nigeria is well endowed with natural gas. The current estimate for the country's gas reserves is about 159 trillion cubic feet. About 50 per cent of this is associated gas, which is a by-product of oil production.

Presently, most of the gas is being flared. For example, because of lack of adequate utilization infrastructure, about 62 per cent is flared and 22 per cent re-injected. Apart from the negative environmental impact of gas flaring, Nigeria loses about $2.5 billion annually.

However, there is a conscious effort by the government to put out these flares by the year 2008. So we have to make proper arrangements for the utilization of such huge gas volumes.

Co-ordinated performance

There are four distinct segments in the gas chain: the production, which is being handled now by the oil companies; the transmission, which is the main activity of the NGC; the distribution; and the end users. All segments of the chain must work efficiently in a co-ordinated fashion, for the industry to be said to perform well.

Although the NGC does some distribution, we try to encourage private companies to undertake that task. For example, currently, we have gas distribution being done in the Ikeja (Lagos) area, by GasLink. Unipetrol and one other oil company have 40 per cent under a build, operate and transfer arrangement.

Also, we have an agreement with Shell Nigeria Gas for the distribution of the commodity in Otta and Agbara areas of Ogun State in the western part of Nigeria. The arrangement is based on the same build, operate and transfer agreement.

Since we concentrate on gas transmission, we are responsible for the development of a national gas grid. Our plans are that by 2010, this national gas grid should be fully in place.

Q: Will the gas grid target industrial or domestic users, or both?

A: The national gas grid will be the main infrastructure from where different lines would be drawn. As we all know, the gas grid is a highly capital-intensive project, and once it is in place, then the consumers can be reached by constructing small lines to complete the system.

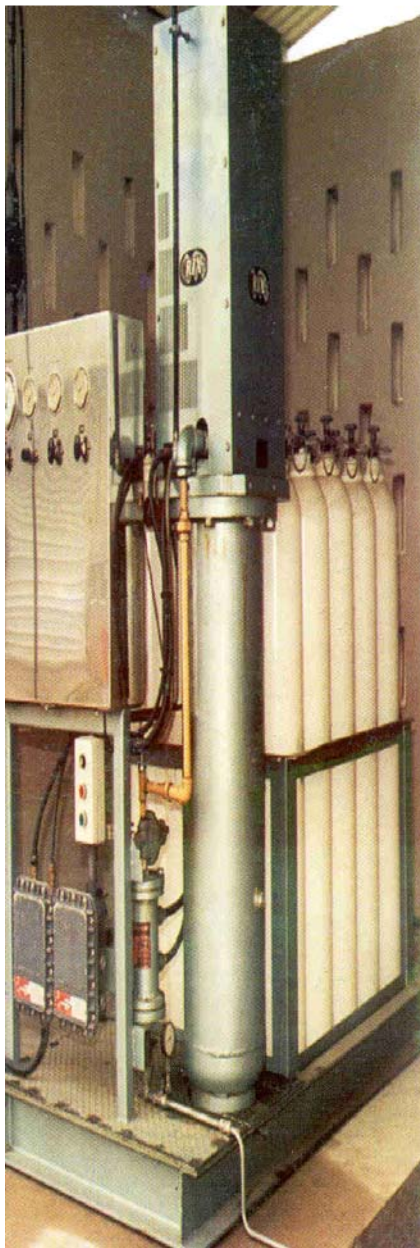
We plan to implement the national gas grid in phases. Right now, our major transmission lines are in the Western Delta region. We have gone from Warri to Lagos, and we are already in parts of the eastern areas, such as Akwa Ibom State. From there we plan to go to Gboko, Benue State, in the northern part of Nigeria. So there are plenty of opportunities.

Government support

To take care of the priority aspects of the infrastructure, the government is presently supporting the NGC with funds through the NNPC. However, for other projects that would tie in the smaller industries, we finance that from our own revenue.

The NNPC has been gracious to allow the NGC to fund its projects from its internally-generated revenue. So, we get our budget approved and we operate within that, to the extent that part of our generated revenue is spent on some capital projects.

I think that the NGC is about the only subsidiary of the NNPC that has been granted such a concession. I believe it is the intention of the NNPC to support all its subsidiaries so that they can begin to fend for themselves.



Above: Compressed natural gas filling station at NGC head office, Ekpan

Then, of course, another way of funding could be through joint ventures, where a partner or partners bring in revenue towards the realization of an agreed project. An example is the West Africa Gas Pipeline project which is on course for the export of gas from Nigeria to the West Africa region. Through the build, operate and transfer arrangement, a private company will bring the funds, while the NGC will provide the facilities. In the process of selling the gas, the company will recoup its money plus some profit, over an agreed period.

Another possibility is private investment. People can come and set up export-oriented projects that would produce products that rely on gas usage. In that case, people can float such companies on their own, and buy gas from the NGC.

Q: Even though you are presently focusing on the Nigerian home base, does the NGC have long-term plans to export gas and related products beyond the West Africa region?

A: Right now, the country's gas consumption is about 1.0 billion standard cubic feet/day, and about 40 per cent of that is accounted for by LNG. In the long term, discussions are already on to establish other LNG plants in the country. After largely taking care of the domestic market, we shall kick off the West Africa gas project with exports to the Benin Republic, the Republic of Togo, Ghana and hopefully expand further.

Q: Talking about the domestic market, statistics show that industrial consumption of gas is on the increase. However, the majority of the people live in the rural areas, where trees are cut down and used as fuel for cooking and so on. What long term plans does the NGC have to encourage rural dwellers to replace wood with gas as a major source for their domestic energy needs?

A: First of all, the NGC deals in natural gas, whereas what is used domestically for cooking is liquefied petroleum gas, which is produced by the refineries as a by product of crude oil.

Basically, we service the power generation industry, cement and fertilizer factories, transportation, and similar industries. These are the areas that we are developing right now. But in the future, as you rightly suggested, it would be possible to pipe gas to homes for domestic use.

Right now, we have a pilot project where we have piped gas to the NGC housing estate in Warri, and the gas is used

Above: Cross-section of the plant area at the Nigerian Gas Company terminal station in Ikot Abasi where natural gas is being supplied to the Aluminum Smelter Company of Nigeria

Below: A Nigerian Gas Company vehicle converted to run on compressed natural gas being refilled at a CNG station in Ekpan

for cooking, refrigeration and so on. So, in the future and with enlightenment supported by well laid out estates, we could easily supply gas for domestic use.

I want to emphasize that one area we are trying to encourage now is transportation, in terms of using compressed natural gas (CNG) to displace liquid fuel, so that pressure can be reduced on premium motor spirit.

We are working on a number of projects in that regard. For example, we have converted some of our vehicles and they have been running on CNG. Equally, we have done the same conversion for Shell Nigeria.

We feel encouraged and quite confident that we are now trying to woo other large corporate bodies to convert their vehicles to CNG. Furthermore, we are going to install similar CNG plants in Warri, Lagos and Port Harcourt, for the time being. But ultimately, we shall encourage private investors to take over, because these are areas of great opportunity for them.

Q: As you are well aware, the wind of privatization is blowing strongly across Nigeria. Old industries are rejuvenating, while new ones, especially in the power sector, are being seriously contemplated. How do you plan to supply the large volumes of gas that the new electricity companies would inevitably expect the NGC to provide?

A: First of all, before you supply natural gas to any customer, you need a base load to make the unit price attractive, especially to high gas-consuming projects, such as fertiliser and electricity generating companies. For example, if a new power factory is built in Abuja, which is about 1,000 km from our base in Warri, the Ajaokuta-Abuja-Kaduna gas pipeline will be quite viable and easy to implement.

So, that would be a welcome development and we are poised to meet the challenges by supplying them with natural gas. But the key point is that the price has to be right, because to sustain gas development, there must be an appropriate price, and there should not be any talk of subsidy.

Q: What are the major problems that the NGC is grappling with, and what other problems do you foresee?

A: The major problem that we have is that of funding. This is because gas projects are highly capital intensive, especially regarding the development of the national grid. So we are thinking that if it could be made into a national infrastructure, to be funded jointly by the government and private investors, then the consumers could pay for the gas through the small lines, to make the venture commercially viable.

Also, the development was retarded by the absence of a national gas policy. Happily, the National Assembly (which is our legislature) is seriously addressing the subject, and we are very hopeful that before the end of this year, a national gas policy will be in place.

Once we have that, it will spell out the role of all the parties such as the investors, and the incentives that all the stake-holders will enjoy. As gas consumption is steadily increasing, the NGC is also becoming stronger, and we see the future as very, very bright.

Q: I thank you for your time.

Nigeria Liquefied Natural Gas:
monetizing the nation's gas reserves

An NLNG tanker at the terminal. Customers for the gas include Italy's Enel, Spain's Enagas, Turkey's Botas, Gaz de France and Portugal's Transgas.

Part of the Nigeria Liquefied Natural Gas (NLNG) complex at Bonny, in Rivers State. NLNG is owned by the NNPC (49 per cent), Shell (25.6 per cent), TotalFinaElf (15 per cent) and Agip (10.4 per cent).

A view of the NLNG staff housing estate at Bonny in Rivers State.

Eleme Petrochemicals Company Ltd:
a world-scale petrochemical complex

In recognition of the important contribution which petrochemical products can make to the national economy, the government, through the NNPC, established the Eleme Petrochemicals Company Ltd (EPCL).

The Port Harcourt-based firm was set up as a world-scale grassroots petrochemical complex, which is being developed in stages due to its capital-intensive nature.

So far, 85 per cent of the offshore portion of the project costs was financed with loans from Japanese, Italian and French financial institutions. The remaining 15 per cent and all the local currency aspect of the project costs were financed by the NNPC.

The technical back-up services are being provided by Foster Wheeler Management Operations (UK), Technimont SpA and Comerint SpA, both of Italy. As a prerequisite in the loan financing agreement, 130 expatriate personnel of different categories and expertise were engaged in 1996, to serve as technical back-up in the first four years of operations. By January 2001, the figure had been trimmed to 43 and would be completely reduced eventually.

Two views of the EPCL plant in Port Harcourt

Certainly, the EPCL is of great importance to Nigeria, as among other functions, it provides basic petrochemical raw materials locally, utilizes the nation's abundant natural gas resources which would otherwise be flared, and provides job opportunities to the citizens. It is noteworthy to state that, according to a United Nations study, one job in complexes of this type in a developing country generates, on average, seven additional jobs outside.

Furthermore, the EPCL saves foreign exchange through import substitution, acts as a catalyst to Nigeria's industrial expansion and diversification of the economy, and enhances the acquisition of modern technology and know-how in the country.

Plants and facilities

The complex's plants and facilities include an olefins plant, capable of producing 300,000 tonnes/year of ethylene and 126,000 t/y of propylene. This is expandable to 400,000 t/y of ethylene and 145,000 t/y propylene.

Another unit produces 250,000 t/y of polyethylene, and has a nameplate capacity of 270,000 t/y of LLDPE/HDPE. The polypropylene plant produces 80,000 t/y, which is easily expandable to 120,000 t/y. Butene is also produced.

Utilities and offsite facilities include steam generators, electric power generators, raw water treatment facilities, plant and instrument air system, nitrogen plant, effluent treatment facilities and so on.

The EPCL has a plastic technology development centre, which is an arm of its Commercial Division intended to provide after-sales service to the firm's customers.

The centre was developed in collaboration with the United Nations Industrial Development Organization (UNIDO), for product application and testing, mould design and fabrication, plastics technology research and other relevant activities. Between 1995 and 1996, all the plants and facilities were successful in their completed performance guarantee tests.

Above and below: During a tour of the complex, Farouk U Muhammed inspects some of the products manufactured by EPCL.

Feedstock supply

The main feedstock for the complex (483,000 t/y of natural gas liquids) is obtained from the NNPC/Agip/Phillips joint venture extraction plant, located at Obiafu/Obrikom, about 80 km from the EPCL facilities. This unit also supplies most of the fuel gas requirements of the complex (30m cubic feet/day of gas). It should be noted that the propylene-rich feed to supplement the NGL feedstock used in propylene production is obtained from the Port Harcourt Refining Company.

EPCL's products include polyethelene and polypropylene resins of various grades and colours. The choice of the products for the complex was influenced by the need to fill a large vacuum in the Nigerian industrial sector. The products from stage one of the complex find applications in household items, agricultural and construction films, medical and pharmaceutical goods, packaging, automobile parts and many others.

The company is intensifying its strategies and efforts to make products that are derived from locally-available materials that are marketable internationally, judging by the results of market forecasts.

In the domestic market, large quantities of polyethylene and polypropylene products are being sold to downstream processors all over Nigeria. The availability of these raw materials locally has led to increased capacity utilization by most of the downstream processors.

Gas tanks at the EPCL site

Import substitution gains to the nation from the EPCL are estimated at $1.3 million per day, when the plants are working at 100 per cent of their installed capacity. Many cottage industries are also being set up around the country to take advantage of the availability of the raw materials locally, thereby increasing employment opportunities in the private sector and thus contributing to national development.

From 1995 to date, over 198,900 t of various grades of resins and 89,608 litres of nitrogen have been sold in the domestic market. Local downstream processors of EPCL products have also begun using the raw materials to produce goods of high quality that are exported to various countries around the world.

Polyethylene exports

The export of polyethylene and polypropylene products started in March and September 1996, respectively. EPCL products have been exported to various countries including the United Kingdom, the Netherlands, Turkey, India, Egypt, Spain, the USA, Cote d'Ivoire, Belgium, Sweden, Ghana, South Africa and Algeria.

The company's products are doing very well in the international market in terms of quality. The steady increase in demand for EPCL products, supported by repeated export orders, serves to reinforce this laudable achievement.

All this suggests that the EPCL indeed has a bright future. The company's position will even get better if adequate and timely investments are made for capacity expansion based on local and international market survey.

To ensure that the complex continues to operate efficiently, profitably and safely, the company's safety fixtures and fire-fighting facilities are ready tackle any emergency situation. The various plants and facilities were designed to be environmentally friendly. Equally important, they are being operated in a manner that will not compromise the set standards.

Realizing that the efficient functioning of the EPCL alone will not be enough, the company has through the years maintained a very cordial and mutually beneficial relation with its host community. To mark the company's good deeds to the community, the EPCL has been bestowed with the enviable status of the Number One Corporate Citizen of the Eleme Kingdom, by its Paramount Ruler, His Royal Majesty, Ngei A O Ngei, the Onne Eeh Eleme.

With the support that EPCL is enjoying from the federal government and its agencies, the government and good people of Rivers State, and very importantly the host community, the company is determined to continue with its success story.

The Department of Petroleum Resources: overseeing Nigeria's petroleum industry

The Department of Petroleum Resources (DPR) is a strategic arm of the Ministry of Petroleum Resources that regulates the petroleum industry in Nigeria, in terms of rules of operations, enforcement of laws, standards, safety and many other guidelines.

The Department issues the necessary permits to those who operate in the industry, such as licensing of operating procedures for upstream and downstream. A brief account of how it evolved may put the activities of this important Department in proper perspective.

The DPR's mandate dates back to the colonial era in early 1950s when it started activities as an arm of the Ministry of Lagos Affairs. At that time, it was just a small unit which mainly collected data on imports.

However, after oil was discovered in the 1950s and the commencement of production in 1958, there was the subsequent arrival of new oil companies such as Chevron, Gulf Oil, Mobil, Agip and others. After they started operations, competition increased, and so did discoveries and production.

These developments started giving rise to a more demanding situation for the DPR. Consequently, it changed from a unit of the Ministry of Lagos Affairs, to a Division in the Ministry of Mines and Power, later to the Ministry of Petroleum and Energy, and then to the Ministry of Petroleum Resources around 1975.

In 1977, the NNPC was created, and as such the DPR had to formulate different laws to meet the dynamic situation of the oil industry. Between 1945 and 1950, the oil ordnance law gave everything only to British companies. However, with the expansion of the industry, the DPR started formulating different laws, right from the pipeline laws of 1958 and subsequent amendments.

Perhaps the major law was the Petroleum Decree or Act of 1969, which spelt out in detail, the oil exploration and production activities that have been operational up till now. In all of these, the rule has consistently been to ensure that the oil industry is encouraged to continue to expand.

Another aim has been to create and fine-tune an enabling environment for exploration and production, first for the foreign investors that came in earlier, then for the local aspect of the 1990s when Nigerian investors were given discretionary concessions. All of these were to ensure that exploitation of petroleum in Nigeria was done in line with international standards.

Apart from the enforcement of laws, the DPR also mediates in conflicts between oil companies and their host communities, as well as in cases of disagreement between petroleum companies.

The DPR Director, Mac Ofurhie, who is a geologist by training, explained that the Department is currently handling a lot of these disagreements now that more players have entered the field. He wants both the local and foreign investors to appreciate that, such disagreements are normal when a new venture is starting.

"I am sure that with time, everyone (both Nigerians and foreigners) will know what the operational rules are, then things will stabilize," he said.

The DPR also encourages increases in oil reserves, as targeted by the federal government. "By 2003," continued Ofurhie, "we aim to have reserves of 30 billion barrels, with production of 3 million b/d.

"Our projection beyond that is that, by 2010, our oil reserves should be 40bn b with production of 4m b/d. These are the government's targets, and it is the responsibility of the DPR to encourage investors and companies to achieve them," he added.

One of the ways that the Department has been pursuing that objective is by opening up more acreage. This was started with the shallower areas, followed by the marine ones, before moving to deeper waters. It was stated that prospectors are now operating in blocks as deep as 1,800 metres.

Within the last five years, there have been a lot of oil discoveries. Quite surprisingly, most people thought that those were gas-prone zones. But over one billion barrels of oil have been discovered offshore in the last five years. Certainly, the competing oil companies felt encouraged by the past results.

Opening concessions

The DPR is pushing ahead with the opening up of more concessions, so that the target set by the government can be met. The Department is also arranging to allocate some marginal fields in order to inject some local and increase local participation, in association with foreign partnerships.

The smaller local oil companies are being encouraged to negotiate with the bigger ones, so as to increase the output of the marginal fields some of which have not been producing for upward of 10 years.

As could be imagined, the functions of the DPR are not problem-free. The area that seems to generate the toughest problems is the oil-producing Niger Delta, where certain communities are not happy about the degradation of their land as a consequence of oil production activities.

Although efforts have been made by past governments to address this important issue, the present democratic administration has rededicated itself to tackling and solving this serious problem.

"I believe the federal government is addressing that issue with the creation of the Niger Delta Development Commission (NDDC), which is to focus on the creation of job opportunities, infrastructure such as roads, water, electricity and address environmental problems. All these and more are meant to ameliorate the situation of the communities," said Ofurhie.

It is generally believed that given the calibre and commitment of the NDDC's new Chairman, Chief Onyema Ugochukwu, and his able colleagues, the Commission should do a good job of lessening the youth crises in the Niger Delta.

In turn, that would help in creating a better environment for the oil companies that operate in that area. It is part of the DPR's responsibility to liaise with the NDDC to support it in achieving its objectives, for the benefit of all concerned.

One tough problem which the DPR has been battling over the years with minimum success is to lessen or eliminate gas flaring in the country. However, all the laws that have existed through the years did not succeed achieving that aim.

At some point, the Department had to resort to penalties for flaring. Initially, the penalty amount was quite small and most of the companies found it easier to pay the fine than devise ways and means of stopping the flares. As time went on, the DPR kept increasing the amount to be paid as penalty.

Although the fine is now substantial, what is more important could be the package of incentives which the federal government has offered for gas-related projects. These include tax holidays, and capital allowances which have made investment in the Nigerian gas sector very profitable. Consequently, there are now many companies such as Chevron, Mobil, Shell and others that are involved in a lot of gas gathering.

Ofurhie confirmed that these are some of the suggestions which the DPR made to the government, and 2008 has been set as the year in which there will be zero flaring in the country. The Director is so confident that he believes that some of the oil companies will achieve zero flaring before that target year.

The DPR has kept in focus its mandate to constantly encourage local participation in the petroleum industry. In line with OPEC's objective of trying to encourage such participation by the citizens of Member Countries, Nigeria started initially in the 1970s by acquiring equities.

By the 1990s, indigenous oil companies were encouraged by allocating to them discretionary blocks. A lot of progress has been made in that regard, as presently, at least eight local companies are actually producing oil under that scheme. Additionally, the soon-to-be-implemented marginal fields project is also aimed at further encouraging indigenous participation.

As is well known, Nigeria has for many years been the largest oil producer in Africa and also a significant world producer. However, for more than six years now, the country has been grappling with the embarrassing problem of scarcity of petroleum products, particularly premium motor spirit (PMS).

'The present democratic Administration has rededicated itself to tackling the land degradation problem.'

This problem, which was much worse during the military era before the advent of the present democratic government, and which keeps recurring, has been having a serious negative impact on the nation's economic and social activities. It is one of the major responsibilities of the DPR to ensure that petroleum products reach every filling station in Nigeria. That does not seem to be happening consistently. So, what really is the problem?

According to Ofurhie, who was appointed from the NNPC to take charge of the DPR last February, the scarcity issue is a very sensitive problem which has kept everyone very tense.

"The downstream had created the problem. About 90 per cent of our time is spent on facing the downstream that makes very little positive contribution to the economy. Ironically, because of petrol scarcity now and then, we have very little time for the upstream that brings in all the money," he said.

Ofurhie believes that the scarcity has created its own economic problems and the effect on the nation is serious, which is why it is beginning to have a lot of political implications.

"I think the problem of scarcity arose from the four refineries that were not maintained. They were neglected for the past five to ten years, so they have not been performing the way they should. The result has been wide shortages of petroleum products, especially petrol. Consequently, the nation imports petrol so as to complement what the four refineries produce," Ofurhie explained.

As it were, the situation gets compounded for at times PMS cannot be produced by the local refineries because of one problem or another. Instead, they are only able to produce diesel and the heavier products. Then imports to fill the gap becomes about the only option.

"Even if you have all that in place," Ofurhie went on, "people have learnt to make so much money out of scarcity, that they started creating logistics problems of getting the petrol to where it should be. So, people started to hoard and sell above the regulated prices.

"We are prosecuting offenders to the best of our ability. But I think that the deregulation drive by the present democratic administration will make it possible for private investors to participate in the procurement and distribution of petroleum products."

Many strongly believe that if the deregulation is properly implemented and an understanding is reached between the federal government and the labour unions, the problem of petrol scarcity in the country will be solved.

This is because the price of petroleum products cannot be pegged. Instead, an enabling environment would be created in which investors can own refineries, purchase and process crude oil, and make reasonable profits.

"We can start with import liberalization, price adjustment and monitoring. After that, if there is total deregulation of petroleum product prices without pain, the commodity will be readily available all over the country, and everybody will be happy," concluded Ofurhie.

The Ministry of Environment:
aiming for zero gas flaring by 2008

*Concern for the environment is uppermost in the mind of the Nigerian government, asserts the Minister of State for Environment, **Chief (Dr) Ime Titus Okopido** (pictured here), in this interview with the OPEC Bulletin's Editor-in-Chief, **Farouk U Muhammed, mni**.*

According to the 1990 World Bank report, whose observations are still relevant today, the world environment is indeed at risk because of a multiplicity of factors, among which are soil degradation, soil erosion, deforestation, air pollution, water contamination, water hyacinth menace and biodiversity losses.

In combating environmental problems, sustainable development practices and policies have become integral parts of the planning process of the Nigerian government.

In 1988, the government established the Federal Environmental Protection Agency (FEPA), which was charged with redressing of the following major environmental problems: poverty alleviation, afforestation, erosion control, municipal solid waste management, combating desertification and mitigating the effects of drought, protecting and managing water resources, and rational use of oil and gas resources.

Others are industrial pollution, managing hazardous, toxic and radioactive waste and chemicals, protecting marine and coastal resources, human health and sanitation, and sustainable agricultural and rural development.

In fact, the present democratic government felt so strongly about the issue of the environment that upon assuming power, it created the Federal Ministry of Environment in June 1999, which then absorbed FEPA and all its functions.

Basically, the mandate of the Ministry as detailed in the national policy on the environment is to co-ordinate environmental protection and natural resources conservation for sustainable development, and specifically to secure a quality of environment adequate for good health and well being; promote the sustainable use of natural resources; restore and maintain the ecosystem and ecological processes and preserve biodiversity; raise public awareness and promote understanding of linkages of environment; and cooperate with government bodies and other countries and international organizations on environmental matters.

For effective implementation of the national policy on the environment, the Ministry is implementing a number of priority programmes, a few examples of which should suffice.

Because there is growing evidence of indiscriminate dumping of domestic waste in the country's urban areas caused by inadequate waste disposal facilities, the Ministry has embarked upon a pilot project in Nyanya surburb of Abuja. The project involves waste minimization through source reduction, reuse, recycling and the use of biodegradable packing materials. The project will be replicated in other cities around the country.

The main objective of the Ministry in the petroleum and solid minerals sectors is to check environmental degradation and other forms of pollution arising from the exploration and exploitation of petroleum resources and solid minerals.

The oil-producing Niger Delta is one of the Ministry's priority areas of action. Consequently, the Ministry has initiated a process for the systematic cleaning up of the Niger Delta. Towards this end, an integrated action plan with short, medium and long term strategies has been drawn up for the clean-up and remediation of the contaminated sites in the Niger Delta.

Furthermore, eleven universities in Nigeria have been identified by the Ministry as centres of excellence for research in specific areas of environment and natural resource conservation.

Some of the selected institutions include Abubakar Tafawa Balewa University (Bauchi), for environmental impact studies on petroleum, natural gas and solid mineral resources, mining and savannah

plains; the University of Lagos, for environmental human resources development; the University of Technology (Minna), for climate change and fresh water resources; the University of Ibadan, for solid waste and hazardous waste management and transfer of technology; the Federal University of Technology (Owerri), for soil erosion control; and Ahmadu Bello University (Zaria), for human settlements and land use planning.

Rightful place

Determined to take its rightful place in the global environment arena, the Ministry has prepared an update for the ratification of relevant international agreements, conventions and protocols on the environment.

Earlier this year, Nigeria's Minister of State for Environment, Chief (Dr) Ime Titus Okopido, addressed the 22nd Kaduna International Trade Fair, where he spoke about environmental issues (see page 46).

During my Member Country visit to Nigeria, the Chief also made candid remarks about these topics, including the problem of gas flaring in the country.

The nation's gas is mostly still being flared. However, a lot of schemes are in place to address that problem. For instance, Chevron Nigeria, according to its own programme, will down flare 75 per cent of its gas by 2004. By the time in-house arrangements are concluded, the modalities would have been established that would allow for the consumption of the balance of 25 per cent.

Another major company, Mobil's Nigerian unit, produces offshore most of the time, so the issue of gas flaring is not much of a problem as for the firm, because it now pipes all its gas to the LNG terminal at Bonny.

According to the Minister, "The problem we are having is with the Shell Petroleum Development Company. However, they have seen the need and the possibility that if money is available, we could even down flare the gas before 2008.

"It seems their concern mostly is to produce crude oil for this country and care less about the ecosystem. But they have to fall in line with government policy, as far as the present dispensation is concerned."

To underscore his point about the possibility of eliminating gas flaring earlier, the Chief added, "The company that was constructing the LNG trains at Bonny was given three years to complete the job. However, they did it in one and a half years. So, if money is made available, more trains can be constructed to take care of the huge volume of gas that is still being flared."

To show that it means business, the government has now made it a policy that no new license will be issued to any oil company without it specifying the modalities for down flaring of gas by 2008. President Obasanjo has taken a bold and unprecedented step to support the Ministry of Environment in its drive towards zero gas flaring by 2008.

"Like I have always said," continued the Minister, "it is not in the interest of Nigeria that we continue the flaring, because the gas we are flaring is an irreplaceable loss. And you will find that the oil companies are now going into offshore production. If we fail to build industries to use the gas, we shall definitely get stuck."

Many observers of the Nigerian economic scene agree with Chief Okopido, because gas is needed to build fertilizer factories for Nigeria, which really is an agriculture-based nation, with plenty of fertile land. The 19 northern states are producing cereals, vegetables and a vast array of other foodstuffs for the country. However, the nation has few fertilizer factories.

The Chief gave as an example Malaysia, which has about 120 fertilizer companies, even though it is a smaller country than Nigeria. If gas resources are properly harnessed, as is now the drive, more cement factories can be built. Also, additional huge gas turbines can be constructed to provide a cleaner source of energy.

In fact, many ancillary industries will spring up as a result of more judicious use of the huge volume of gas that is currently being flared. Chief Okopido explained that his Ministry is collaborating with the Ministry of Industries and the United Nations Industrial Development Organization (UNIDO) to see what additional industries can be established locally that would absorb the flared gas.

Since the creation of the Ministry of Environment about two years ago, these and other possibilities are the challenges it has been facing, particularly in liaison with the NNPC and other players in the energy sector. The Minister has led teams that have visited all the major oil companies to look at their facilities, see their problems, and appraise their down flaring programmes.

Said the Minister, "In fact, Elf has promised that by 2002 they will flare down 1.6 trillion cubic feet of gas, and by 2005 they will flare down 2.0tr cu ft. This is the company's own programme. By the time we source for industries that will consume the gas that is being flared, the problem will be solved."

According to Chief Okopido, statistics show that at the current rate of gas flaring, Nigeria is losing $6 billion yearly. His basic philosophy is that Nigeria's population is so large that the country cannot afford to continue wasting valuable resources that can be harnessed for the welfare of its 120 million people.

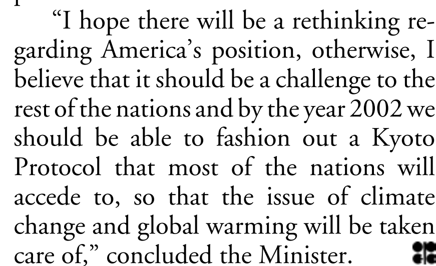
Regarding the Kyoto Protocol and the position of the Bush Administration, Chief Okopido said, "Frankly, I see the development as a challenge to the rest of the nations minus the United States. It is an established fact that the US produces 25 per cent of the world's carbon dioxide.

Energy policy

"Last year when President Clinton visited Nigeria, we started working out an energy policy between our two governments, and I know that along the line, we reached some agreement. So we were thinking that in terms of the number of companies the Americans have and the huge volumes of carbon dioxide they produce, that they could have agreed to cut down their carbon dioxide production by seven per cent by 2010. It is sad that the situation is now what we have."

The Minister emphasized that some people fail to understand that environmental problems have no political boundaries. So, even if global warming manifests itself in developing nations, the developed nations will still experience part of the problem.

"I hope there will be a rethinking regarding America's position, otherwise, I believe that it should be a challenge to the rest of the nations and by the year 2002 we should be able to fashion out a Kyoto Protocol that most of the nations will accede to, so that the issue of climate change and global warming will be taken care of," concluded the Minister.



Demonstrating environmental responsibility

An address given earlier this year
to the 22nd Kaduna International Trade Fair by
***Chief (Dr) Ime Titus Okopido**, Minister of State for Environment*

This trade fair is another major step towards the actualization of the potential of Nigeria as the hub of commerce in Africa. I wish to caution that in the rush to reach the rewarding peak of development, we do not repeat the mistakes of the developed countries, which emphasized industry at the expense of good environmental quality.

Industrialized city

The setting of this trade fair in Kaduna is a good starting point for my remarks. By all standards, Kaduna is one of the foremost industrialized cities in Nigeria, housing major textile plants, breweries, tanneries, a petroleum refinery, a super-phosphate industry and so on.

Paradoxically, these industries, which have existed for decades, have made very little attempt to show concern for the pollution of the environment. Kaduna residents, particularly those in Kakuri industrial estate, have cried out to deaf ears for long without heed.

Both the surface and the ground waters in Kaduna are virtually dead. Most wells in Kakuri are unfit for human use because of the industrial pollution of the ground water. The air is polluted, emitting pungent and choking gas odours, particularly at night, thereby giving the residents a nightmare. This cannot continue unabated.

The law demands responsible behaviour from all waste generators and dictates that the waste is the liability of the generator from cradle to grave. In my various meetings and communications with captains of industry, I have stressed this and solicited voluntary compliance. But with the poor response so far, the erring industries will need to be sanctioned to drive the point home.

Another way the Nigerian environment is being seriously stressed is the importation of myriads of second-hand goods. Most of these used goods have already outlived their usefulness in their countries of origin. We merely assist these developed countries with better technologies to dispose of their waste by importing them to our country and exacerbating the already grotesque waste management problem.

The importation of used appliances like air conditioners and refrigerators using chlorofluorocarbons (CFCs) has international implications. Continued importation of these and other used appliances will have a far-reaching effect on our international image.

For example, the imported used refrigerators and air-conditioners contain CFCs, which are the greatest culprits in ozone depletion. To stem the negative trend, the government will have no choice but to ban the importation of these used goods.

On our part, Nigeria has joined the committee of civilized nations by acceding to both the Montreal Protocol and Vienna Convention, which control ozone-depleting substances (ODS). In this regard, 11 refrigerator manufacturing plants have been helped to replace CFCs with more environmentally-friendly substances.

Also, at least 40 foaming industries have enjoyed our assistance by way of fabricating plants, which use non-ODS substances. All these efforts are a demonstration of our environmental responsibility and should place Nigerian goods in positive competitiveness in the international market.

Feasibility study

Conscious of the negative impact of untreated effluents from the industries in Kaduna, this Administration has selected it as one of the four cities in Nigeria, that is, Kaduna, Kano, Aba and Lagos, for which a comprehensive feasibility study for effluent treatment is soon to be embarked upon. At the end of the study and its implementation, the Kaduna River and its precious ground water will live again.

The import of my remarks is to drum it home that the present Administration will only encourage development which takes full consideration of the environment and will endorse those products which are themselves environmentally-friendly.

It is products of this nature that the government will always support, both for importation and manufacturing in Nigeria. We call on the private sector and the research institutions to join hands with the government in this crusade.

Nigeria:

striving for peace, equity, technological and economic development

My 18-day Member Country mission to Nigeria was quite hectic and jam-packed, *writes Farouk U Muhammed.* It afforded me the chance to see first hand the gargantuan problems, the great challenges and the wonderful opportunities facing Nigeria.

Here is a country with the human and natural resources that could have by now enabled it to become an economic and technological power, not only in Africa but indeed in the world.

However, this progress and development have been retarded by a multiplicity of factors, chief among which was a lengthy stay in power by the military, with the attendant undemocratic consequences.

Happily, a cross-section of Nigerians believe that hope is not lost and are confident the country could still attain greatness within a decade, provided certain national problems are properly tackled and solved. These main problems shall be highlighted at the end of this report.

Suffice it to say that President Obasanjo's democratic regime is doing all in its power to move the country forward. The government's efforts include the vigorous battle against corruption, drastic reduction of wastage, provision of efficient telecommunications and electricity supplies, as well as security to life and property, and the proper implementation of the ongoing privatization scheme.

It is hoped the government will ensure that the oil companies achieve zero flaring of gas by the target date of 2008, so that the 250,000 barrels/day of gas equivalent that are burned daily in the nation's hydrocarbon fields, can be put to profitable use.

Already, the government has linked up with its oil joint venture partners such as Shell, Mobil and Agip, to help generate over 2,000 megawatts of electricity next year. Other measures being taken to address the flaring problem include the gas-to-liquids project, which is being executed between NNPC and Chevron.

The government is not limiting its efforts to the home base alone. It has a long-standing agreement for the supply of electricity to the country's northern neighbour, the Niger Republic.

Nigeria is also cementing its co-operation links with other countries, especially fellow OPEC Members such as Venezuela, Iran and Algeria. Not long ago, Dr Lukman led a government delegation to Algeria for discussions on plans to link the two countries by a gas pipeline. The project will provide additional outlet for Nigerian gas to southern Europe, through a connection to Algeria's existing network.

Additionally, Nigeria and Iran have created a joint working commission, aimed at boosting technological, industrial, economic, and commercial co-operation between the two nations.

It is a fact that for many years to come, petroleum will continue to be the key foreign exchange earner for Nigeria. It is for that reason that the government is aggressively pursuing a policy of strengthening the NNPC and its 10 wholly-owned, and two partly-owned subsidiaries, as well as 19 associated companies. This is being done partly through the streamlining of the country's hydrocarbon laws to make them more investor-friendly.

It is noteworthy that the government is implementing a massive capacity-building plan covering oil and gas reserves, increases in daily oil output, and profitable gas utilization.

The government, which has already deregulated the upstream sector, is working very hard to attract joint venture partners to invest $40 billion in the next few years, to enable it achieve 40 bn barrels of oil reserves and four million b/d of oil production by 2010. Presently, the proven oil reserves and daily oil production are 25bn b and 1.8m b/d, respectively.

The prospects are said to be very good, especially given the strong indications that NNPC may increase its joint venture contribution to $6bn, which will be an all-time high. Going by recent oil discoveries offshore, the opportunities for huge finds in the deep and ultra-deep offshore waters are indeed great.

In its quest to find oil in commercial quantities in the Chad basin in the north-eastern part of Nigeria, the NNPC will soon resume drilling in seven blocks, where it stopped drilling in 1999 after gas was found in only one out of 23 wells.

The government is also giving top priority to the implementation of the country's LNG projects. Of the envisaged six LNG trains, two have come on stream, the third

is nearing completion and the rest are expected to follow almost in quick succession. Obviously, Nigeria is determined to exploit its enormous gas resources, which have so far not been developed to the nation's advantage.

However, the government has a lot more to do if it is to bring the petroleum sector to full steam. One area it needs to seriously address is the low content of local input in the industry, which seems to have remained the same despite Nigeria's over 40 years experience in the oil sector.

The government needs to speed up its revival of the four refineries which were deliberately left to decay in the last seven years, the military era. For about seven years now, Nigeria has been importing petroleum products to make up for the shortfall of the low output from the four refineries. Certainly, Africa's number one oil producer cannot afford to indefinitely continue with such imports. The country should be exporting and not importing such products.

Other perennial problems that have to be solved are the provision of steady electricity and water supplies and reliable telecommunications, particularly telephone. Instead of concentrating on meeting their mandate, the refineries and indeed other industries divert their attention to the setting up and maintaining of huge turbines to generate their own electricity as well as source and purify their own water. In a bold bid to solve these problems, the government has, within its two years in office, invested more than $2 billion dollars. The power situation has improved significantly, and the National Electric Power Authority has promised Nigerians uninterrupted electricity supply from the end of this year.

Apart from attracting investment into the petroleum sector, the government is also highlighting the wonderful opportunities that exist for investors in the solid minerals area. Nigeria has documented 33 solid mineral commodities in about 450 locations nationwide. They include metallic minerals, gemstones, precious mineral metals, gold, tin, granite, bauxite, tar sand, clay, gypsum salt, fluorite, barite, radioactive minerals and iron. Others are columbite, aquamarine, tantalite, tourmaline, sapphires, topaz and kaolin.

To attract greater foreign investment in Nigeria, the government has hosted prospective investors from many countries in Asia, Africa, Europe, North and South America. Also, many government delegations have visited several other countries in these continents.

The available evidence shows that the government is not relenting in its efforts to promote transparency and create a level playing field for all participants within an investor-friendly environment.

In order to defuse the time bomb of restlessness among the nation's youth, which constitute more than 50 per cent of the country's population, the Obasanjo government has signed a national youth policy. The policy will encourage the maximum impression of youthful creativity, ingenuity, hope and freedom, and provide an enabling structure for self-impression and self-actualization.

Furthermore, the Niger Delta Development Commission, which the government established earlier this year, has put together an integrated regional masterplan for the Niger Delta. When it comes into effect, the masterplan will ensure the even and sustainable development of the hitherto neglected and volatile oil-producing Niger Delta.

If properly implemented, as Nigerians believe will be the case, the scheme will replace tribulations and violence with hope and progress for the people of the area. Even though the Niger Delta communities keep agitating for more support, the oil companies such as Shell, Mobil, TotalFinaElf, Agip and the others have been making notable contributions to the development of the areas in which they operate within the Niger Delta.

As a gesture of strong support for government's determination to expedite the country's economic and technological progress, Nigeria's House of Representatives (the Lower House) is finalizing a bill for the provision by the federal government of $287bn worth of infrastructure in all parts of the country over the next 20 years.

Indications are that the Senate (the Upper House) will support the bill. A systematic and efficient implementation of such a gigantic project will do the country a lot of good by creating chains of positive economic activities in both the public and private sectors.

To recap, Nigeria has no shortage of a variety of raw materials as well as qualified and experienced manpower in all disciplines, with which to accelerate the country's strides towards becoming a world-class economic and technological powerhouse.

For example, the petroleum sector is led by an internationally respected technocrat and manager in the person of Dr Lukman. Also, the NNPC is lucky to have at its helm, another well-grounded and highly-reputable industry whiz-kid, Engineer Gaius-Obaseki, who strongly sees his appointment not as a job *per se*, but as service to the nation.

Commitment to serve

The excellent staff of the NNPC and its subsidiaries at different levels, always exhibit a commitment to serve and make positive contributions, despite the difficulties. They are ever-prepared to go the extra mile towards the achievement of the Corporation's set objectives. In that regard, Nigeria is very lucky indeed.

This scenario also plays out to a great extent in other non-petroleum government agencies, where most of the workers are doing their level best. However, there are serious problems and these include how best to combat the rat race, which has engulfed an otherwise peaceful and kind people.

Although this get-rich-quick mentality and some sharp practices were learnt from the advanced countries, Nigerian leaders must set the correct tone, live by example within their means, and help the citizens to rediscover their positive values.

The majority of Nigerians believe that it is quite possible, provided that the government is able to eliminate or reduce to a negligible level, corruption by some officials, and especially the more disturbing and dangerous ethno-religious crises that pop up now and then around the country.

To be sure, the government is waging a serious crusade to rid the nation of these vices and set it on the path of peace, equity, transparency and expeditious technological and economic development.

Certainly the country has a winning team. If the major problems which are being relentlessly tackled are solved, surely the sky will be the limit for the great progress of Nigeria's petroleum and other sectors of the economy.

Venezuela's Bitor signs new agreements for the supply of its Orimulsion power plant fuel to China and Canada

Caracas — Bitor, the subsidiary of state oil corporation Petroleos de Venezuela which handles Orimulsion, has signed a $6 billion deal for the supply of between 6.0 million and 6.5m tonnes/year of the power plant fuel to China.

Bitor's Managing Director, Alfredo Riera, announced that the 30-year contract was signed between Bitor and Chinese company PetroChina, which is a subsidiary of the China National Petroleum Corporation (CNPC).

"This is the biggest agreement in the history of Bitor," Riera pointed out, adding: "It is a 30-year supply agreement which has an equivalent value of $6bn over the whole course of the contract."

Preparations were under way for the construction of a new Orimulsion production unit, with work scheduled to begin early in 2002.

This unit would provide Orimulsion exclusively for the Chinese market and should be up and running by the end of 2003 or early in 2004, Riera noted.

The unit had 80 per cent Venezuelan funding and would generate more than 300 direct jobs and 800 indirect employment opportunities in Anzoategui and Monagas states, eastern Venezuela.

Riera said the new contract was particularly good for Bitor, since south-east China was one of the biggest growth areas in electricity demand in the world.

"We are in a position to turn ourselves into one of the preferred fuel suppliers to the electricity sector," commented Riera.

"This also represents a secure market for what we could call one of our trademark fuels, Orimulsion, which was formulated and designed in Venezuela by Venezuelans."

Riera said Bitor foresaw the eventual construction of three or four more production units and a further deal was expected to be signed with Italy later this year.

In a separate development, Bitor has also reached agreement in principle regarding a long-term Orimulsion supply contract with Canada's New Brunswick Power Corporation (NBP).

The accord was announced at a meeting attended by Riera, NBP Chairman Max Lewis, its President James Hankinson, and Vice-President Stewart Macpherson.

The agreement provides for a 20-year Orimulsion supply to NBP's 1,050-megawatt Coleson Cove generating station, near St John, New Brunswick, on the Atlantic coast.

Bitor will supply a minimum of 1.6m t/y of the fuel to the plant, with shipments due to commence in the autumn of 2004. NBP has an option to increase the annual amount substantially above the minimum level.

The two companies have an existing agreement that provides long-term Orimulsion supply to NBP's 315-mw Dalhousie station. Shipments began under this arrangement in 1994.

The Coleson Cove station is NBP's largest generating plant. It consists of three 350-mw generating units. The station will be converted to use Orimulsion during the next three years.

As part of that process, NBP will make certain modifications to the units and add an air quality control system to the station. This will include flue gas desulphurization and electrostatic precipitator equipment.

NBP's conversion plan will allow sufficient capacity to be available during the conversion work to meet its load requirements.

Once converted, Coleson Cove's emission rates and generating costs will be substantially reduced, while electricity output will increase substantially.

Bitor produces Orimulsion from the vast reserves of natural bitumen, a heavy hydrocarbon, in the Orinoco belt of east central Venezuela. The belt covers an area of around 20,000 square miles.

The fuel is manufactured from natural bitumen, using water and a surfactant that allows the two to combine into the emulsion. It is sent via pipeline to the port of Jose on the Caribbean coast, where vessels are loaded at a single-mooring buoy.

Orimulsion has been in commercial use since 1991 and is shipped to customers in Denmark, Italy, Germany, Finland, Lithuania, Canada, Japan and China.

President Obasanjo vows to invest $5 billion/year in Nigeria's oil industry

Abuja — The Nigerian government, through the Nigerian National Petroleum Corporation (NNPC), is to spend $5 billion/year over the next ten years in the oil sector.

This will be done together with international oil companies that the NNPC has joint ventures with, which are Shell, ExxonMobil, Chevron, TotalFinaElf, Agip and Texaco.

In an address delivered on his behalf to an industry gathering in Lagos, President Olusegun Obasanjo said a considerable amount of the funds would go into gas utilization and commercialization projects, in line with the government's target of zero flaring by 2008.

Obasanjo lamented that about 65 per cent of the 1.39 trillion cubic feet of associated gas produced in Nigeria annually was being flared.

"This amounts to a huge economic loss to the country and prompts the government to enunciate a policy of ending gas flaring in the country by the year 2008," he pointed out.

The government was working on the necessary framework that would govern the activities of the gas industry, in its efforts to supply gas to industrial, commercial and residential users.

Obasanjo added that the country's crude oil reserves currently "stand at 27bn barrels and we hope to raise this to 30bn barrels by 2003, while expanding our production capacity to 3 million b/d in the same year."

He went on to say that the country's oil reserves should reach 40bn b by 2010, by which time the nation hoped to be able to produce about 4m b/d of crude oil.

Although oil and gas exploration started over several decades ago, a significant proportion of the basin acreages still remained unexplored, the President continued.

He cited the case of the Anambra basin, one of the marginal producing areas, where exploration had revealed potential of about one billion barrels of crude.

"Actually, it is considered to be largely a gas province, with estimated reserves of over 30tr cu ft," Obasanjo noted.

The government was looking forward to a mass injection of capital by both indigenous and foreign investors, said the President, adding that the existing regulatory regimes that hinder competitiveness were gradually being dismantled.

His administration was also putting in place the required framework to encourage private-sector participation in refining, and the distribution and marketing of petroleum and petrochemical products.

Obasanjo called on potential investors to "get prepared to swing into action to utilize the windows of business opportunities that are available."

He assured the gathering that the government was committed to the provision of an enabling environment for industries to thrive in Nigeria.

Saudi Arabia turns down Japanese bid to revive oil talks

Riyadh — Saudi Arabia has rejected a Japanese proposal to renew an oil-drilling concession in the Neutral Zone shared by the Kingdom and Kuwait, according to a report in the *Arab News* last month.

A high-level committee chaired by Saudi Arabian Foreign Minister, Prince Saud Al Faisal, turned down the offer of talks with Japan's Arabian Oil Company (AOC), the report noted.

Saudi-Japanese negotiations to renew AOC's concession in the Neutral Zone failed last year when Tokyo rejected conditions set by the Kingdom.

"The Japanese side tried again to convince Saudi officials to continue talks on the licence issue, but the committee categorically refused," sources said.

They added that committee, assigned to hold talks with oil majors intending to invest in the Kingdom's upstream gas sector, had decided earlier not to intervene in the issue and told the Japanese side that it was under the jurisdiction of the Ministry of Petroleum and Mineral Resources.

During the talks with AOC, Saudi Arabia had call on Japan to invest in petrochemical projects related to the Neutral Zone's Khafji field, utilizing gas for feedstock, but Japan rejected the offer, said the report.

The Kingdom had also called on Japan to increase its purchases of Saudi oil to the level of 1.5 million barrels/day and invest in a $2.1 billion railway project, it added.

Meanwhile, AOC is now in talks with Kuwait over the remaining half of the oil concession, which must be completed before January 2003, when the current contract expires.

The Japanese firm currently produces 150,000 b/d of crude on the Kuwaiti side of the oil field.

Iran plans to boost its crude oil output capacity to 4.5m b/d

Tehran — Iran's crude oil output capacity will reach 4.5 million barrels/day in the next four years with the implementation of 12 buy-back accords to develop national reserves, it was announced last month.

The First Deputy Managing Director of the National Iranian Oil Company (NIOC), Mehdi Mirmoezi, said that that under the contracts, 520,000 b/d would be added to the country's production capacity.

In addition, condensed gas production capability would be boosted by 390,000 b/d, with about 220m cubic metres/day added to natural gas production. Liquids output would be expanded by some 3m tonnes.

Mirmoezi said around $21 billion had been invested directly in the implementation of 21 contracts, signed over the past four years.

These deals were estimated to bring in hard currency revenues to the tune of $12.5bn/year, the official Islamic Republic News Agency (IRNA) quoted him as saying.

Once other projects under way in the South Pars gas field were completed, the country's total revenue from this sector was expected to reach $17.8bn.

The IRNA report quoted Mirmoezi as saying that last year, 71.1m cu m/d of gas had been injected into the country's oil fields.

He expressed hope that a gas shortage in the national grid would be offset with the commissioning of the sixth, seventh and eighth phases of the South Pars field.

A $140m contract had been signed between an Iranian and a foreign company for the injection of 75m cu m/d of gas into the Aghajari field, said Mirmoezi, adding that the project would be financed by NIOC.

Each oil well in Iran on average yielded some 3,000 b/d of crude, while annual crude oil exploitation accounted for 1.2 per cent of the country's oil reserves, he noted.

BP chosen to lead Indonesia's efforts to market LNG in China

Jakarta — The Indonesian government has appointed BP to lead its liquefied natural gas (LNG) marketing efforts in China, according to a report in the *Jakarta Post* newspaper last month.

The state oil and gas company, Pertamina, which had been leading the marketing efforts, would now be taking a back seat and supporting BP in marketing LNG from the proposed Tangguh project in eastern Indonesia, said the report, quoting BP Indonesia's Vice-President for Government and Public Affairs, Satya W Yudha.

The BP move was aimed at smoothing the way for Tangguh LNG to win an impending tender for the contract to supply LNG to China, the report noted.

The government, Pertamina and BP all believed that with BP taking the lead in the marketing efforts, the opportunity for Tangguh LNG to win the tender would be greater, given the fact that BP had been involved in the development of the proposed LNG receiving terminal in southern China.

The decision to appoint BP as the front

negotiator was made during a meeting between the Minister of Energy and Mineral Resources, Dr Purnomo Yusgiantoro; the Director General of Oil and Gas, Dr Rachmat Sudibjo, and officials from Pertamina and BP.

China has announced an auction to be held soon for importing 3 million tonnes/year of LNG through the Guangdong terminal from 2005 onwards.

Nations including Indonesia, Iran, Qatar, Australia, Brunei, Malaysia and Russia are preparing to compete for China's first ever LNG import contract.

BP holds 50 per cent of the 14.4 trillion cu ft of natural gas reserves that would support Indonesia's new LNG export centre at Tangguh, in the eastern province of Irian Jaya.

Satya said the Indonesian government had stressed that it would only want to export LNG to China from the proposed Tangguh LNG plant.

Plans had been prepared for at least one 3m t/y LNG train at the greenfield development, which would be a catalyst for initiating industrial development in the under-developed Irian Jaya province, according to industry sources.

The sources said Indonesia's Bontang LNG complex, led by TotalFinaElf, was also keen to expand capacity by 3m t/y for the China contract.

South Africa's Sasol aims to boost Qatar's green fuel output

Doha — South African company Sasol Synfuels International, has signed an accord aimed at stepping up production of environmentally-friendly diesel fuel in Qatar to 250,000 barrels/day in the next 10 years.

Sasol is Qatar Petroleum's joint-venture partner in the $800 million gas-to-liquids (GTL) plant at Ras Laffan in Qatar, according to a report in the *Gulf Times* newspaper.

The paper quoted Sasol Executive Director, Pat Davies, as saying that although the schedule for the second phase of the scheme was yet to be drawn up, output was likely to be in the order of 90,000 b/d.

The first phase of the project, due for completion in 2005 or early 2006, would provide some 24,000 b/d of GTL diesel.

Davies went on to say that capacity could be added in various phases. Asked about the total number of phases being planned, he replied: "If one repeats the scenario we did in South Africa, three to four phases are what we are looking at. It took nearly 10 years for us to reach that stage."

Regarding project funding, Davies noted that this would be similar to other major comparable projects currently being implemented in Qatar.

"We are looking forward to a maximum debt-equity ratio. The target we are trying for is 70:30 debt-equity ratio," he said.

The environmentally-friendly diesel would not eat into liquefied natural gas markets, as the latter fuel was mainly used for power generation, but GTL diesel was primarily a transport fuel, he observed.

Latin American Energy Organization accepts Algeria as new member

Algiers — Algeria has officially joined the Latin American Energy Organization (OLADE) with special status, it was reported last month.

The move was confirmed following an agreement signed on behalf of Algeria by the country's Energy and Mines Minister, Dr Chakib Khelil, and OLADE's Executive Secretary, Dr Julio Herrera.

Herrera noted that Algeria's membership of the organization constituted significant support for OLADE, due to the important role that Algeria played in the international oil industry.

He added that it was an honour to have a country like Algeria among OLADE's members. The organization's operations would be reinforced and its actions more respected as a result of the new membership, he said.

Khelil pointed out that in joining OLADE, Algeria would benefit from the long and rich experience the organization had acquired over the years.

The organization grouped together some 20 countries, which had a great deal

In brief

Oil majors to exploit "massive" Kazakh field

BRUSSELS — A number of European oil majors joined forces last month to exploit what is described as "a potentially massive oil field" on the north coast of the Caspian Sea known as Kashagan. The Offshore Kazakhstan International Operating Company (OKIOC) is a consortium of nine international shareholders, including subsidiaries of BP, BG, Royal Dutch/Shell, ExxonMobil, TotalFinaElf and ENI, amongst others. Industry sources in the Belgian capital said the find could propel Kazakhstan into the premier league of oil-exporting nations. Kazakhstan is the largest of the former Soviet Union's satellites, but despite its known oil reserves, crude revenue has so far been limited. But this rich new oil reserve in Kashagan could change that as estimates of the size of the discovery alone have been put as high as 20 to 30 billion barrels of recoverable oil. European oil analysts say that even if the field has just 20bn b, it would be among the top five in the world.

Oman shortlists firms for refinery unit

MUSCAT — The state-owned Oman Refinery Company (ORC) has short-listed eight foreign firms for a contract to build an 18,000 b/d diesel hydro desulphurization plant, a refinery official announced in the country's capital last month. The official named the short-listed firms, derived from a list of 20 foreign and local companies, as: Japan's Chiyoda Corporation and Mitsui, Technip of France, the UAE-based Petrofac International, Larsen and Toubro of India, Germany's Krupp Uhde, SK Engineering and Construction of South Korea, and Italy's Tecnimont. "The plant will reduce sulphur from diesel, which we expect to sell to the local market and hope to export as well," the official said. He noted that the company expected to make an award in September. ORC produced 28.7m b of products last year.

Chevron begins Typhoon field output

NEW ORLEANS — Chevron USA Production Co has announced that oil and gas production began in July at the Typhoon field, located in the deepwater Gulf of Mexico. Depending upon well performance, production is expected to reach about 40,000 b/d of oil and about 60 million standard cubic feet/d of gas during the fourth quarter 2001. The commercial life of the Typhoon field is estimated to be five to eight years. "Realizing first production at Typhoon only 18 months after project approval is the result of pace-setting performance in deepwater project development," said the firm's President, George Kirkland.

In brief

TotalFinaElf develops Mexican Gulf field

PARIS — TotalFinaElf of France has reported the start-up of a new field development on block 243 at the Mississippi Canyon site, in the deepwater sector of the Gulf of Mexico. The company said the Matterhorn field, located in a water depth of 850 metres, would be brought onstream in about two years and would produce around 40,000 b/d of oil. The field is wholly owned and operated by TotalFinaElf, which said it intended to develop the concession using a floating structure that would hold wellheads, and separation and treatment facilities. The floating structure would be able to handle 33,000 b/d of oil and 55 million cubic feet of natural gas per day. The company said it would transport production through connections with existing sub-sea pipelines. The project represents TotalFinaElf's second field development start-up since November 2000.

US petroleum demand slows in first half

NEW YORK — For the first time, limited growth in domestic deliveries of petroleum products during the first half of this year reflected the overall weakness in the United States' economy. Oil product deliveries increased by only 1.3 per cent in the first six months of 2001 compared to last year, according to the American Petroleum Institute (API) in its *Monthly Statistical Report*. The API noted that demand indicators worsened in the second quarter, with deliveries barely able to match year-ago levels. Despite record production, gasoline deliveries of 8.42m b/d rose by just 0.9 per cent, compared with last year's first half, but they declined by 1.8 per cent when comparing June 2001 with the same month in 2000. Deliveries were lower by 0.3 per cent when the two second quarters were compared, the report noted. Lacklustre growth rates resulted from sharply higher springtime gasoline retail prices and slower national economic growth.

SPC reports poor 1H01 margins

SINGAPORE — The Singapore Petroleum Company (SPC), operator of a 285,000 b/d refinery, said last month that its refining margins were poor for most of the first half of this year and the outlook for the second half remained even more challenging. "Although there were short periods of positive margins, the over-supply of petroleum products in the (Asian) region has continued to affect margins adversely," said SPC in a report on its half-year performance. With the economic slowdown expected to impact on more businesses in the second half, the downstream business units would have to compete even harder for market share, the company added.

of know-how in the field of renewable energy, he said.

Khelil went on to note that the Algerian national oil and gas company, Sonatrach, was already present in Latin America, notably in Peru, where it had developed gas exploitation activities.

"For us, it is imperative to have relations with OLADE," said Khelil, adding that membership of the organization would open the way for other African countries to developing energy co-operation with the institution through the newly-formed African Energy Agency.

Indian firm seeks involvement in UAE's Dolphin gas project

Abu Dhabi — Engineers India Ltd (EIL) will soon begin talks with Dolphin Energy on involvement in the Qatar-Abu Dhabi gas pipeline project, according to a report in the *Khaleej Times* last month.

EIL had already submitted pre-qualification documents in this regard, the paper quoted the Indian Ambassador in Abu Dhabi, K C Singh, as saying.

The Ambassador was speaking after the opening of EIL's first regional office in Abu Dhabi. The office will provide a range of engineering services to the oil and gas industry, in areas such as offshore production systems, petroleum refining, petrochemicals, processing, pipelines, fertilizers, mining and metallurgy.

Singh said the opening of the office was timely, given the fact that India was opening up its economy and showing a growing interest in liquefied natural gas projects in the Gulf region.

Meanwhile, the newspaper also reported that another United Arab Emirates-based company, the Al Manhal International Group (AMIG), would supply gas to the Indian state of West Bengal for a new 2,000-megawatt power plant.

Talks were being held between the West Bengal Power Development Corporation and AMIG on supplying gas for the Sagardihi scheme, which is planned for Murshidabad district, at a cost of $744 million.

A memorandum of understanding has been signed between the state government and AMIG. The paper added that AMIG was already engaged in a project in neighbouring Orissa state to build a 2,500-mw gas-based power plant.

Development of Iraqi oil deposits a priority for Russian oil firms

Baghdad — Iraqi Deputy Oil Minister, Fies Shaheen, has said that Russia's involvement in developing his country's oil deposits and buying its oil was a priority for the Iraqi government.

"We take into account Russia's role in the regime of the smart sanctions and we will sign contracts with it to develop the Iraqi oil sector, as well as the industrial and trade sectors," he said.

"We co-operate with Russian oil companies as part of the United Nations programme of oil in exchange for food and expect it to take a more active part in Iraqi economic projects in the near future," the Russian news agency Itar-Tass quoted him as saying.

He added that following Russian pressure in the UN Security Council, the United States and the United Kingdom were expected to drop their draft proposals to change the UN sanctions against Baghdad.

The proposal for 'smart sanctions' against Iraq envisaged toughening control over Iraqi oil exports to prevent supplies of weapons and dual-purpose goods entering the country.

Algerian-Libyan joint oil company holds general meeting

Algiers — The Algerian-Libyan Exploration and Production Company (Alepco), recently held its general meeting in the Algerian capital, under the chairmanship of top-level energy officials of the two countries, Dr Chakib Khelil and Ahmed Abdulkarim Ahmed.

Khelil is Algeria's Energy & Mines Minster and President of the OPEC Conference, while Ahmed is the Chairman of Libya's National Oil Corporation.

Sources said that the meeting examined a programme of oil and gas co-operation between Algeria and Libya and appraised the activities of Alepco. The two sides evaluated the future prospects of the company and also studied and endorsed its financial position.

Khelil indicated on the sidelines of the meeting that Alepco had already received two exploration permits, one in Algeria and the other in Libya.

The Algerian permit was located in the Ghardaia area, in the south of the country, where Alpeco had made an oil discovery which was still being assessed.

The second permit was situated in Libya's Ghadames basin, on the border between the two countries.

Alepco was set up some years ago to undertake exploration and production activities in the two countries.

Venezuelan Oil Chamber gives green light to government energy plan

Caracas — The Venezuelan Oil Chamber will support the country's energy plan, which is due to be announced by the government soon, according to an official from the institution.

The plan aims to cover all the nation's energy needs in the short and long term, to search for new sources of electricity to supply the entire population, and to help in the development of the country.

Oil Chamber Chairman, Hugo Hernandez Rafalli, noted that oil companies from the private sector were not only waiting to participate in the new plan, but wanted to invest in activities that would boost domestic power generation.

Engineering firms covering services and construction were already studying the possibility of using light crude to generate electricity.

"Venezuela sells light crude to China, Italy, Canada, and India to be used in generating electricity," Hernandez was quoted by the Venezuelan Press Agency (Venpres) as saying.

"Therefore, we should do the same thing as they do. Light crude is cleaner than carbon and less expensive than fuel oil, which is used today," he added.

He also observed that companies were interested in creating partnerships with the government to build new electricity plants in different regions of the country. This would bring investment from national and international companies.

Hernandez pointed out that Venezuela had all the necessary conditions to attract international investment, especially in the hydrocarbons sector.

Nigerian official highlights dangers of gas flaring

Abuja — The flaring of petroleum-associated gases in Nigeria alone accounted for 28 per cent of global flaring in 1995, according to Akwa Ibom State Commissioner for the Environment, Isidore Akpan-Ebe.

He told a visiting delegation of the World Conference of Mayors at Eket, in the south-eastern state of Akwa Ibom, that the activities of the oil companies, which accounted for some 90 per cent of Nigeria's revenue, were a major factor in Nigeria's environmental equation.

Delivering a paper on the role of government and oil companies in environmental protection, he pointed out that gas flaring, which was common in the Niger Delta region, was responsible for ecosystem heat, acid rain, and the destruction of fresh water fish, forests and property.

"Not long ago, an expert indicated that the heat and energy generated from gas flaring in 1986 was equivalent to all the electrical energy generated by the National Electric Power Authority," he noted.

Akpan-Ebe stated that oil companies operating in Nigeria had a responsibility "in ensuring that the Niger Delta ecosystem and its communities are protected".

He went on to say that before 1988, the nation's initiatives in environmental protection were haphazard and largely uncoordinated.

"It took the 1988 Koko toxic waste dumping episode to impress on the nation the need to set up a specialized institution to oversee the protection of its environment, through the promulgation of federal environmental protection decree 58 of 1988," he noted.

In brief

EC to set up forum for energy security
BRUSSELS — With concern increasing in the European Union (EU) about security of energy supply, at a time of projected rising demand, the European Commission (EC) plans to establish an energy and transport forum to advise it on issues, including the restructuring of the region's energy supply. EC Vice President responsible for energy and transport, Loyola de Palacio, said the forum would also be mandated to look at competitive market issues and areas of environmental concern. In addition, it would oversee all EC policy initiatives on energy, as well as assist in organizing debates on the EU's security of supply green paper and the future white paper on a common transport policy, up to 2010. "It will provide a single framework for dialogue between the EC and the energy and transport industries," de Palacio said.

Oil services boost Schlumberger profit
PARIS — Franco-American engineering group Schlumberger announced last month that its second-quarter net profit had risen by 20 per cent to $187 million, compared with the same period in 2000. The group's operating revenue for the period rose to $3.6 billion, from $2.3bn a year earlier. The strong earnings growth was attributed largely to the oil field services sector, which was bolstered by strong demand in the quarter. Oil field services revenue increased by 44 per cent in the period, while the worldwide M-1 rig count grew by 27 per cent, Schlumberger said in a statement. In the first quarter, oil field services revenue had climbed by six per cent, while the rig count had fallen by five per cent. "The excellent oil field services results in the second quarter reflect the beginning of robust growth in the eastern hemisphere," Group Chairman and Chief Executive Officer, Euan Baird, said.

ExxonMobil praises lead phase-out
IRVING, TEXAS — US major ExxonMobil has welcomed commitments to phase out leaded gasoline in sub-Saharan Africa. Participants representing 25 sub-Saharan African countries last month committed to accelerate programmes to phase out leaded gasoline, with a target date for full phase-out of 2005. The formal 'Declaration of Dakar' was approved on June 28, 2001, at the conclusion of a three-day conference in Dakar, Senegal, convened by the World Bank under the Clean Air Initiative in sub-Saharan African cities and attended by representatives of governments, industry and civil society, and international non-governmental organizations. ExxonMobil welcomed the agreement as a landmark development in recognizing and addressing this important issue for Africa.

In brief

BP reassesses disputed Azeri operations

London — BP said last month that it was "assessing the situation" after suspending its exploration work at a disputed oil development in the Caspian Sea. "Essentially it is an inter-government dispute between Iran and Azerbaijan," a BP spokesman told the official Islamic Republic News Agency (IRNA), adding that no wells had yet been drilled. Britain's largest company signed a production-sharing agreement (PSA) with Azerbaijan in 1998, granting exploration, development and production rights for what it described as the Alov-Araz-Sharg area of the Caspian. Under the terms of the accord, the consortium, which comprises Statoil of Norway, the State Oil Company of the Azerbaijani Republic (SOCAR), and BP as operator, was to drill three exploration wells this year, with up to an additional five wells by 2004.

Power demand boosts Korea's gas sales

Seoul — Strong demand from the power-generating sector boosted the Korea Gas Corporation's (KGC) sales by 33 per cent to $3.22 billion in the first half of this year, it was disclosed last month in the South Korean capital. Operating profit rose by 27.4 per cent to $391.47 million, the state-owned company said. Ordinary income shot up by 25.6 per cent to $281.49m, while net income rose by 24.9 per cent $193.16m. Company officials said the main thrust for the first half performance came from a 50.4 per cent increase in the sale of gas for power generation, well above market expectations. South Korea imports all of its gas in the form of LNG for the electricity-generating sector. Industry observers have said that South Korea's power demand would increase significantly in the coming years when a planned power grid link-up with North Korea was established.

UK has dearest petrol in Europe

Brussels — A British survey, carried out by the University of Westminster's transport group, shows that the United Kingdom has the most expensive petrol in Europe and that the most expensive part of the country is, ironically, oil-producing Scotland. The results have sparked off anger and controversy in Scotland, reminiscent of the mood last year when fuel protests almost brought the country to a halt. According to the survey, energy taxes account for some 75 per cent of the price of UK fuel. Average UK petrol prices are 79 pence a litre, but in rural Scotland, prices are even higher at 85 pence a litre. In the rest of Europe, petrol costs 52 pence a litre in Switzerland, 56 pence in Ireland, and 73 pence in the Netherlands.

Kuwait Oil Company building first vessel to tackle pollution

Kuwait — The Kuwait Oil Company (KOC) has completed 75 per cent of the construction work on a $9 million ship specially designed to fight pollution in Gulf waters, the Kuwait News Agency (KUNA) reported last month.

KOC Exports and Production Manager, Sanad Al-Sanad said in a press statement that fighting pollution was a crucial issue, which was of particular concern to KOC.

The company had, therefore, set up an entire department for this purpose, in addition to training its staff to react in case of leaks or spills on land or offshore.

He added that the new ship would be one of the most advanced in the world, with the ability to manoeuvre and contain small spills.

The vessel would also be able to fight fires at sea and serve as a supply vessel and towing vessel, equipped with the latest technology in the field.

Meanwhile, the Chairman of the Kuwait Shipbuilding and Repairyard Company (KSRC), Mousa Jaafar Marafi, said the remaining construction work would be completed within three months. The interior was to be completed around October, while the exterior had been completed last March, the KSRC Chairman said.

Iran says it is ready to export natural gas to Turkey via pipeline

Tehran — Iranian Deputy Oil Minister for Gas Affairs, Hamdollah Mohammad Nejad, said last month that there were no basic technical, executive or legal problems concerning the export of Iranian gas to Turkey.

He was quoted by the official Islamic Republic News Agency (IRNA) as saying that under a contract signed by the two countries, Iran was due to start operations for the transfer of gas to Turkey soon.

He noted that the gas had already been transferred to a border station, from where it would be exported to Turkey.

Turkey, meanwhile, said that the scheduled Iranian gas deliveries would not start before a metering station on the Iranian side was confirmed to have met the technical requirements agreed under the 23-year deal, signed in 1996.

"The metering station, which has to be completed by the Iranian side, and is a prerequisite for gas deliveries to start, is not yet ready," Turkish Energy Minister, Zeki Cakan, said in a statement.

Turkey had announced that it was willing to test all gauging systems on the Azargan border point in Iranian territory in the presence of the manufacturer of the system.

As a goodwill gesture, Iran welcomed the Turkish request, Mohammad Nejad said, adding that all necessary measures had been taken for the export of gas to Turkey.

Under the terms of the contract, Iran will export 3 billion cubic metres of gas to Turkey in the first year, with the volume gradually increasing to 10bn cu m/y by 2007.

Indonesia's Pertamina announces gas find in central Sulawesi

Jakarta — The Indonesian state oil and gas company, Pertamina, has announced a new gas discovery with reserves of five trillion cubic feet in the Luwuk Banggal area of central Sulawesi.

The firm said the find was made together with Indonesian production-sharing contractor PT Exspan Tomori Sulawesi, following the completion of the Senoro 2 well.

The well flowed at a rate of 20 million cu ft/day of gas and 435 barrels/day of condensate, confirming earlier findings.

Exspan had also made an oil discovery in the south Sumatra extension block, said Pertamina. It was now testing the Matra discovery in the Sumatra block, where the Matra 2 well flowed at 1,100 b/d of crude.

Pertamina said the reserves would be evaluated with the follow-up Matra 3 well. Exspan was expected to make a proposal

to Pertamina to develop the Matra and Senoro fields.

According to industry sources, the 5tr cu ft gas discovery in central Sulawesi could be developed, based on a power generating plant, while the Matra oil field development would be in line with Pertamina's planned oil production boost in the coming years, although the field could be put into production by 2003.

The Sulawesi area had significant gas reserves, but in smaller pockets, which were best utilized in setting up power-generating plants, as had been done by other oil and gas exploration companies, said the sources.

Exspan recently expanded into the natural gas business and with its latest discovery of gas would now be moving into power generation, especially in Sulawesi, which faced electricity shortages, the sources pointed out.

Dubai's ENOC holds talks on entry into Iranian lubes market

Dubai — ENOC International Sales Ltd (EISL), the global marketing arm of the Emirates National Oil Company (ENOC), has held negotiations with representatives in Tehran in preparation for a possible entry into the Iranian lubricants market.

The firm's Chief Executive, Hussain Sultan, was quoted by the local *Khaleej Times* as saying that having recently raised ENOC's brand awareness throughout Iran, his company was well positioned to respond to any emerging opportunities in that country.

A three-member EISL delegation recently met leading Iranian government officials and traders at a trade fair in Tehran.

The EISL team, which also toured Tehran's automotive spare parts facilities, reported that the majority of brands on sale were locally blended products.

"A number of traders have now expressed interest in marketing our quality brand of lubricants and we are now in discussions with them," the paper quoted Sultan as saying.

EISL is charged with generating group sales, both locally and internationally, for ENOC's aviation, lubricants, asphalt and liquefied petroleum gas services.

French firm gets deal for expansion work on Algerian oil terminal

Brussels — Sofresid, the wholly-owned subsidiary of Bouygues of France, has been awarded a turnkey contract by Algerian state oil company Sonatrach for the expansion of the Mesdar oil terminal in Algeria.

The $44 million contract covers engineering, procurement, start-up and commissioning of a pumping station for the terminal, which is located in the south-east of the giant Hassi Messaoud field.

According to a statement from the French firm, the new pumping station would be able to handle 12m tonnes/year of crude oil, with the capability of being expanded to 18m t/y.

The Mesdar terminal will receive, store and dispatch the crude oil coming from the different oil fields in the area.

The Chairman and Chief Executive Officer of Bouygues, Herve le Bouc, said: "The signing of this contract in Algeria, a little over a year after the one for the Gassi Touil gas collection and compression station for Sonatrach, and the two new contracts awarded recently in Libya, reinforces our position in North Africa and the Middle East."

Kuwait's Independent Petroleum Group suffers 38 per cent profit drop

Kuwait — Kuwait's Independent Petroleum Group (IPG) announced last month that it recorded a net profit of $9.38 million in the first six months of 2001, down by 38 per cent from the same period last year.

The company said in a statement carried by the local press that most of the profit, some $9.67m, came from the firm's operations. The rest was as a result of investments.

IPG drills for oil and owns refineries

In brief

Oman holds oil investment talks
MUSCAT — Oman held talks with foreign firms last month to attract investment in its oil and gas sector, according to an Omani media report. "Many foreign firms have shown interest and we are holding discussions with them," the Under-Secretary of Oil and Gas, Salim Bin Shaban, was quoted by the Omani daily *Observer* newspaper as saying. Currently, 18 multinational firms, including Petroleum Development Oman (PDO), have production-sharing agreements with the Sultanate, he said. Meanwhile, the report also quoted the Omani LNG Chief Executive Officer, Graham Searle, as saying that the Sultanate would decide by the end of 2001 whether to implement a multi-million dollar expansion of its LNG plant at Qalhat in the southern province of Sur.

Russian oil firm looking to boost profile
BRUSSELS — Russia's Tyumen Oil Company announced last month a "huge expansion" of its upstream and downstream profile through a series of joint ventures with foreign oil majors. The company is already Russia's fourth largest oil producer, with output of 800,000 b/d, and is looking to climb into third position in the near future. The company is also seeking a New York Stock Exchange listing from 2002. Company President, Simon Kukes, commented: "We aim to be a multinational company and the first step is the Ukraine. Eastern Europe has logistical advantages for Russian firms. We can bring in oil easily and get a significant market share. I also see a role for us in China, India and the Middle East."

TotalFinaElf announces Italian deals
PARIS — France's TotalFinaElf has announced a number of agreements with Italian energy companies, including a deal to study the possible construction of a power station and the acquisition of service stations. The company said it had signed an accord to study the feasibility of building a power station on the Rome refinery site, in which TotalFinaElf had a 57.5 per cent stake. The deal was signed with Italian companies, Svilupo Impianti Termoelettrici (SITEL) and ERG Petroli, of which the latter owns a 22.5 per cent stake in the Rome refinery. The partners have set up a jointly owned company to carry out the commercial and technical studies, in which TotalFinaElf would hold a 45 per cent interest, SITEL (35 per cent), and ERG (20 per cent). The new plant would be built using the latest gas turbine technology and would have a capacity of 800 megawatts. It would feed steam and electricity to the nearby refinery.

In brief

BP deal to alter European oil market

BRUSSELS — Sweeping changes are expected across the European crude oil exploration, refining and gasoline sectors, due to BP taking significant control of Germany's gasoline retailing outlets. Following the BP deal last month to buy the German company, Eon, owner of the Aral petrol stations and the oil producer, Veba Oil, the British company now has become Europe's largest gasoline retailer. The deal also gives BP a 16 per cent retail market share in Europe. Veba Oil produces around 160,000 b/d of oil equivalent and BP executives have said that the cost of acquiring the firm was effectively $4.0 billion. This comprised a $1.63bn cash payment, $400 million in working capital, $950m in assumed Veba Oil debts, plus $1.1bn placed on the value of BP's stake in Ruhrgas. However, the net cost would be about $2.0bn because BP planned to sell all Veba's upstream oil assets.

Norsk Hydro announces drop in Q2 profit

BRUSSELS — Despite a generally good year, the Norwegian North Sea oil producer, Norsk Hydro, last month reported a sharp fall in its second-quarter profits. Analysts warned that a downgrade of its stock was now probable. Second-quarter operating income in Norsk Hydro's three core areas was below market consensus forecasts. "The most surprising thing is that everything is so much worse than expected," one oil analyst commented. Market makers were also disappointed that Norsk Hydro failed to fully capitalize on this year's healthy oil and gas prices. Company President and Chief Executive Officer, Eivind Reiten, blamed the result on the weak conditions in the United States and its knock-on effect in Europe.

US firm announces Ecuadorian gas find

QUITO — The Energy Development Corporation (EDC) of the United States has discovered natural gas deposits in an exploratory well — Friendship-7 — located in Ecuador's Gulf of Guayaquil. According to industry sources in the Ecuadorian capital, the well produced at a flow rate of 19.4 million cubic feet/day of methane gas. EDC said it would now drill Friendship-8 and carry out tests to determine the extent of the natural gas reserves in block three, which would be added to those discovered in the Friendship gas field in 1970. Ecuadorian Minister of Energy and Mines, Pablo Teran, said that the methane would be used for electricity generation. The Friendship scheme entails the development of block three by EDC and the installation of a plant to generate electricity for the city of Machala, in El Oro Province.

abroad. It markets crude oil and petroleum products in Asia, Africa and Europe.

The company is listed on the Kuwait Stock Exchange with a paid-up capital of $35.29m.

Indonesia's Pertamina announces new oil find in Irian Jaya

Jakarta — The Indonesian state oil and gas company, Pertamina, has discovered 7 million barrels of crude and 17 billion cubic feet of natural gas reserves on Salawat Island, in the eastern province of Irian Jaya.

The firm said the Salawati O-2 well would test the find over the next two months after Salawati O-1 recorded a flow rate of 583 barrels/day of oil and 8.5m cu ft/d of gas.

Pertamina said it had reduced the cost of drilling the Salawati wells to $2.1m, some 49 per cent lower than the budget allocated.

Meanwhile, domestic mining company PT Nickel Indonesia (Inco) has said that its second-quarter earnings plunged to $7.4m, down from $29.2m in the same period last year, due to weaker prices and soft demand globally.

Inco realized a nickel price of $5,139 per tonne during the quarter, down from $7,871 in the corresponding period of 2000, said the firm's Chief Executive Officer, Rumengan Musu.

Production was affected by the lower grade of nickel ore mined. However, second-quarter production improved by 13 per cent to 15,700 tonnes, compared with 13,800 t last year, added Rumengan.

Nigeria to supply petroleum products to Burkina Faso

Abuja — The state-run Nigerian National Petroleum Corporation (NNPC) has signed a memorandum of understanding with Burkina Faso for the supply of petroleum products at concessionary prices.

The deal, aimed at strengthening Nigeria's bilateral aid programme with its West African neighbours, will allow the NNPC to supply petroleum products to Burkina Faso at the domestic price of the products in Nigeria.

The NNPC's Group Managing Director, Jackson Gaius-Obaseki, who signed the deal on behalf of the corporation, said that the agreement, which entailed the supply of petrol, diesel and kerosene was a practical demonstration of African brotherhood, and was part of efforts to assist a needy neighbour.

Gaius-Obaseki noted that the corporation was willing to enter into other areas of business if the government of Burkina Faso was willing, and if it had the financial wherewithal.

He explained that the accord would only survive and remain in place if Burkina Faso kept to its commitment of not allowing smuggled oil products from Nigeria entering its territory.

Burkina Faso Energy Minister, Jean Yameogo, who signed the deal on behalf of his country, said the agreement would help his nation to boost its economic activities, which, in turn, would impact positively on the lives of its people.

Nigeria also supplies crude oil to South Africa, Zimbabwe and Ghana. The latter country gets about 30,000 barrels/day from the NNPC.

Iran urges Japan to make further oil project investments

Tehran — Japan entered the scene of economic co-operation with Iran very late and has thus let its rivals take most of the opportunities, according to the Head of Iran's Chamber of Commerce, Industries and Mines, Ali-Naqi Khamoushi.

Speaking at a meeting with a visiting Japanese trade delegation in the Iranian capital, he called on Japan to make up for lagging behind the others.

The Japanese delegation was led by Nobuyuki Masuda, who is the Head of Mitsubishi Heavy Industries and a senior member of the Japanese Federation of Economic Organizations.

Masuda said, that besides contributing to giant energy and petrochemical projects in Iran, Japan would be willing

to co-operate in the fields of industry, environment and education.

Meanwhile, the Iranian Petroleum Minister, Bijan Namdar Zangeneh, during his meeting with the visiting delegation, called for further Japanese investment in Iranian petrochemical, oil and gas projects and praised Japan's participation in the development of the Iranian South Pars gas field.

Referring to Iran's intention to implement various oil-related projects, he invited Japanese firms to take part in large petrochemical schemes, as well as upstream and downstream oil and gas projects.

Describing gas as a favoured fuel both in Iran and abroad, Zangeneh urged Japanese firms to take part in Iran's gas-related projects.

The Minister pointed out that the special economic zones in Iran were suitable areas for investment by Japanese firms.

Earlier the same month, Iran and Japan signed an agreement valued at $10 billion covering Japanese participation in the exploration of Iran's Azadegan field. If the project goes ahead, it could become Japan's largest oil field development.

The 80-strong Japanese delegation, comprising Foreign Ministry officials and representatives from the Ministry of Economy, Trade and Industry, as well as officials from some 30 Japanese firms, spent several days in Iran, where they also held talks with Iranian oil firms and petrochemical companies.

TotalFinaElf awarded two blocks on gas field in Venezuela

Paris — French oil company TotalFinaElf said last month that a consortium it heads has been awarded two blocks on the Yucal Placer gas development in Venezuela.

The consortium is composed of TotalFinaElf (69.5 per cent), Repsol YPF (15 per cent) and Inelectra and Otepi of Venezuela, which have 10.2 per cent and 5.3 per cent, respectively, in the venture.

The two blocks are Yucal Placer Norte and Yucal Placer Sur, located in an area about 100 km south-east of the capital, Caracas.

Yucal Placer is an important gas field and has been partially exploited at a low production rate since 1989.

TotalFinaElf said in a statement that it would put in place a two-phase development plan which should, upon completion, bring production up to 300 million cubic feet/day.

The development plan includes a drilling campaign and the installation of a gas collection and treatment system. In addition, a connection to the main national gas transport network will also be built.

The consortium has been given a 35-year licence for exploration, development and production on Yucal Placer.

The award of the licence is part of Venezuela's policy of opening up the gas sector to private investment.

ADNOC subsidiary to reach full production capacity of lubricants

Abu Dhabi — ADNOC Distribution will achieve its full production capacity of 60,000 tonnes/year of lubricants by 2004, leading to higher exports, a senior company official said last month.

The lubricants and greases presently produced by ADNOC Distribution amount to 45,000 t/y in various plants.

"We plan to achieve full production capacity of 60,000 t/y by 2004," the firm's Lubricants Sales Manager, Mohammed Hadif Al Shamsi, was quoted as saying by Dubai's daily *Gulf News*.

Some 18,000 tonnes were exported to a total of 42 countries, while the rest went into the local market, he added.

ADNOC Distribution, which is part of the Abu Dhabi National Oil Co, commands a 45 per cent share of the local market.

ADNOC has also launched a new type of engine oil, 15W-40, which Al Shamsi said was a new breed of oil that met the highest US, European and Japanese engine manufacturers' specifications.

"We plan to concentrate our future strategy of sales through the north-eastern region's filling stations and retail sales market," he went on, adding that further expansion of lube plants depended on demand.

In brief

Syria plans gas utilization project
DAMASCUS — Work is due to begin shortly on an integrated gas utilization plan in the Syrian Governorate of Deir Ez-Zour. The scheme will involve the Syrian Petroleum Company (SPC) with its foreign partners, Conoco of the United States and TotalFinaElf of France, a source at the Syrian Ministry of Oil and Mineral Resources disclosed in the capital last month. The venture would make use of associated gas available at the SPC oil collection stations of Al-Furat and Deir Ez-Zour, the Qatari News Agency (QNA) quoted the source as saying. If implemented, the venture would yield 4.25 million cubic metres of natural gas, 1,000 tonnes of butane gas, and 32,000 b/d of liquid condensates. The project's total cost was put at $420m, covering front-end engineering and design studies, and the provision of associated gas reception facilities, wells and reservoir pipelines, and a main export pipeline. The work will be completed in four years.

Japan begins dismantling JNOC
TOKYO — The Japanese government has started dissolving the debt-ridden Japan National Oil Corporation (JNOC), a venture established more than three decades ago to ensure steadier oil supplies. The JNOC dismantling began with an announcement to revamp Japan's United Petroleum Development Company, which was established in 1970 to produce oil from the Gulf region. JNOC was to give up 34 per cent of its 48 per cent stake in United Petroleum to repay its 500 billion yen debt, sources at the Ministry of Economy, Trade and Industry said last month. The corporation was expecting to generate 10bn to 20bn yen from the sale of United Petroleum, which would be revamped under the country's Civil Rehabilitation Law. However, JNOC was prepared to write off more than 60bn yen in losses out of its 83.40bn yen claim on United Petroleum, which had been in financial trouble due to lower crude prices in the past few years.

Argentinean firm drills Ecuador wells
QUITO — The Argentinean company, Perez Companc, plans to drill two exploratory wells in the Ishpingo Tambococha Tiputini area of Ecuador, to substantiate the amount of reserves and quality of crudes in the region. According to industry sources, in the second stage of the project, the state oil company, PetroEcuador, will hold talks with an investment bank to choose a strategic partner for developing the oil potential of the area. Investment for the project could reach $1.7 million. The estimated reserves stand at around 700m barrels of heavy crudes.

Sixth Session of the Conference of the Parties (COP6) signs historic agreement to cut GHG emissions

The OPEC Secretariat established its own Environmental Task Force (ETF) in 1994 to monitor developments in the field of energy use and the environment. Its principal objective is to keep OPEC's Ministers continuously informed about the status of the energy/environmental debate, as it affects the Organization and its Member Countries. The ETF's work is also seen as adding impetus and authority to the discusssions at high-level meetings involving OPEC.

A Quarterly Environmental Report (QER) is circulated to Member Countries, in which the ETF reviews recent activities in the various international environmental fora, monitors changes in energy taxation, and provides background information on relevant forthcoming events, etc. Although this is an internal OPEC document, selected extracts from the publication appear regularly in the OPEC Bulletin for the benefit of a wider readership.

This month's selection comes from the QER published at the end of the second quarter of 2001. It features an extract from the Executive Summary (below), which covers the outcome of the resumption of the Sixth Session of the Conference of the Parties (COP6) in Bonn in July 2001.

Executive Summary

A final agreement to cut emissions of the greenhouse gases (GHGs) that contribute to global warming was concluded in Bonn, Germany, on Monday, July 23, by 181 countries — halfway through the two-week resumed Sixth Session of the Conference of the Parties (COP6) to the United Nations Framework Convention on Climate Change (UNFCCC). It is the first international treaty to restrain energy consumption. But the United States stood isolated, refusing to commit itself to what President George W Bush called a "fatally flawed" agreement that threatened its national interests. After four days of round-the-clock negotiations, Japan, Russia, Canada, Australia, the European Union (EU) and some developing countries reached a compromise that ensures the survival of the beleaguered Kyoto Protocol on climate change, originally negotiated in 1997. In attempting to achieve the Kyoto Protocol goals, which were set out in the 1998 Buenos Aires Plan of Action, the resumed COP6 was intended to bring to a close more than two-and-a-half years of negotiations and finalise the task left unfinished at COP6 in The Hague, The Netherlands, in November 2000. The 'Bonn Agreement' included the issue of sinks, which in particular favours Japan, the Russian Federation, Canada and Australia. In fact, the Kyoto Protocol is watered down due to this inclusion. The EU hailed the Bonn agreement — achieved in spite of low expectations of success — as "an historic decision that would enable governments to ratify the Kyoto Protocol and bring it into force". It hoped the deal would encourage the Bush administration to reconsider its decision not to ratify the treaty. "We have rescued the Kyoto Protocol," said Margot Wallström, the Swedish Environment Minister. The deal sets rules for the use of 'flexible mechanisms', such as emissions trading, and includes a funding package to help developing countries adapt to climate change. The proposals also include carbon 'sinks' — forests and agricultural land that absorb carbon from the atmosphere. Environmental campaigners said the agreement would put GHG emissions from industrialised countries on a downward trend, even though it clearly weakened the deal that was originally agreed in Kyoto. The remainder of the resumed two-week COP6 meeting, which ended on July 27, focused on details of the agreement. The negotiators could not finalise the texts on the Kyoto mechanisms, land-use, land-use change and forestry (LULUCF) and compliance, and postponed their work until COP7 for further negotiation and adoption. The negotiating group on finance, which in-

cludes transfer of technology, Articles 4.8 and 4.9 of the UNFCCC and Article 3.14 of the Kyoto Protocol, did finalise its work at the resumed COP6. The issues in the finance group are of great importance to the developing countries in general and oil producers in particular. The Bonn compromise includes four key issues: finance, mechanisms, LULUCF and compliance.

Modifications to Kyoto

The delegates came close but failed to complete modifications to the Kyoto Protocol on global warming in Bonn on Friday, July 27, as the resumed COP6 ended. Jan Pronk, Dutch Environment Minister and COP6 President, had wanted all remaining technical issues sealed, so governments would have a full text for speedy ratification by their parliaments. But time ran out on the negotiators working on the fine-tuning that lasted until Friday evening. The officials were already weary from all-night last-minute bargaining that saved the 1997 Kyoto pact on GHG reductions the previous Monday. Officials said, as expected, that loose ends would be left for the next round of annual UN climate meetings in Marrakesh, Morocco, in late October, before the treaty would be ready for ratification by individual nations. "We closed the conference with the political package agreed on Monday and adopted as the 'Bonn Agreement' on Wednesday," said Michael Zammit Cutajar, Executive Secretary of the UN conference held in Bonn. "The essential political choices have been made in Bonn," he told Reuters. He said final texts in about five areas, including carbon sinks, compliance and mechanisms, were not quite completed and would be worked on at the Morocco meeting. Earlier on Friday, as the summit drew to a close, German Environment Minister Juergen Trittin lauded its success. "The Bonn conference was a breakthrough in saving the Kyoto Protocol. For the first time countries have committed themselves to a reduction in greenhouse gases," he told a news conference in Berlin. "Now the way is clear for ratification." Countries accounting for 55 per cent of the 30-odd wealthy industrial nations' carbon dioxide emissions must ratify the treaty for it to take effect, forcing them to meet targets for cutting the emissions blamed for global warming. Since the United States, which accounts for about a third of that output, has already rejected the deal, virtually all the big polluters, notably European Union states, Russia, Japan and Canada, must ratify the protocol for it to take effect. All have said they are aiming to ratify next year. Trittin said the accord should come into force before a global summit on sustainability in South Africa in September 2002.

The US White House report is unlikely to offer alternatives to the Kyoto global warming treaty and instead favours hemispheric and domestic plans for reducing GHG emissions, Environmental Protection Agency Administrator, Christine Todd Whitman, said in a *Washington Post* interview published on July 27. "Basically, we're going to continue to do our own thing here," Whitman was quoted as saying. Whitman said the Bush administration would offer a detailed proposal later this year for reducing emissions other than carbon dioxide from US power plants and factories. The Bush administration would also explore plans with Canada and Mexico for curbing levels of GHG emissions that some scientists blamed for global warming. Whitman told the *Post* that she was sceptical that the Bonn agreement would be effective. She was quoted as saying President George W Bush would continue to pursue an alternative approach that stressed research, market-based solutions and technology transfers to developing countries with serious pollution problems.

High gas prices

The high prices of natural gas registered during recent years have encouraged the expansion of US gas production in the immediate future. This, combined with expected growing gas supply from Canada, would moderate the price of natural gas, stimulating users to expand their gas demand, that has been declining during the period of high natural gas prices.

Meanwhile, natural gas output from Canada is expected to continue growing from various sources, including offshore-gas fields from the East Coast and coalbed methane projects.

On the new US energy policy that reconsidered the nuclear option for future US energy supplies, the plan has called for streamlining the licensing process for nuclear plants, strengthening efforts on nuclear safety and improving waste disposal. The plan also looked at the possibility of using existing nuclear plant sites for the additional capacity.

Fuel cell technology still has an air of the 'day after tomorrow' about it — it will not be around in commercial volumes for a few years yet, but, when it does arrive, it could even, in decades to come, dominate the automobile industry.

Firoz Rasul, the Chief Executive of pioneering fuel cell company Ballard Power Systems, is quoted as saying: "The fuel cell will transform the energy industry the same way the microprocessor transformed the (information technology) industry."

Fuel cell investment

Japanese oil giants are investing heavily in fuel cell technology, which they believe may underline their future survival. But pitfalls and risks remain. Already on the road are two relatively new breeds of car: bifuel cars, running on petrol and either liquefied petroleum gas or compressed natural gas; and hybrid cars, powered by smaller engines with electric motors.

The commercial potential of each type is being developed steadily, in order to optimise the balance between performance, economy and environmental harmony. There have also been huge leaps forward with diesel-engined cars in recent years, and much progress has been made in cleaning up and perking up a technology that has been around in large commercial volumes for decades, particularly in mainland Europe. The International Energy Agency recently hosted a workshop on another type of hydrocarbon-based fuel — dimethyl-ether — claiming that it "could become a significant source of energy in the decades to come." But there are downsides to technology, which may not become apparent until it is well in place, and there are claims that catalytic converters, whose purpose is to clean up car exhausts, may, in fact, themselves be sources of pollution.

Additionally, the UAE declared that its petrol stations will supply only unleaded fuel from 2007, Canada announced a ten-year plan to slash car emissions and the UK said that, from April 2002, company car tax would be based on CO_2 emissions rather than mileage.

July[1]

Crude oil price movements

The average monthly price of OPEC's Basket[2] moved lower for the second consecutive month in July, losing $2.37 per barrel to register $23.73/b. The highest loss among its components occurred with the Brent-related crudes, where Bonny Light and Saharan Blend lost $3.21/b each. Minas followed, as it moved lower by $2.27/b. Dubai and Arabian Light also decreased, by $2.37/b and $2.13/b, respectively. Tia Juana Light and Isthmus incurred the smallest losses, of $1.75/b and $1.60/b, respectively (see **Table A**).

The weekly price of the Basket went through a continuous decline in the first three weeks of July, to reach a low of $23.07/b, after which it improved in the fourth week. In the first week, the Basket retreated by 67¢/b, in reaction to indications that the United Nations Security Council was likely to approve a straightforward extension of the 'oil-for-food' programme. However, OPEC's decision to keep output unchanged halted the price decline. Dated Brent and Minas suffered the biggest losses. The downtrend continued into the second week, as the Basket shed 4¢/b of its value, basically influenced by the big loss in the Brent market, which was caused by a sudden supply overhang after a major halted its buying spree. The decline continued into the third week, albeit with a higher magnitude of $1.16/b. The main factor that initiated the bearish sentiment was a report by the International Energy Agency which slashed the demand growth expected for 2001 by more than 500,000 barrels per day to just 460,000 b/d, at a time when Iraqi exports were re-established. Adding to the bearish momentum was the US stock data, which showed a build in both crude and distillate inventories, according to the weekly report of the American Petroleum Institute (API). The report also showed a decline in refiners' purchases, as refinery utilization was down to 94.8 per cent, amid weakening margins. The recovery in the fourth week occurred in response to OPEC's decision to cut production by 1m b/d, to manage the over-supplied market. West Texas Intermediate (WTI) accumulated a rise of $2/b initially, in a swift reaction to the new production level of 23.2m b/d (excluding Iraq). The rise in the Basket was limited to 45¢/b, as Minas suffered a big loss of $1.61/b. A further improvement took place at the end of the month, on news that Iraqi exports had declined in the fourth week of July by 560,000 b/d and also as the API's weekly report showed a drop in US crude and gasoline inventories.

US and European markets

Poor refiners' margins, which led to cuts in refinery runs, were the main factor affecting the crude market in the USA in July. However, the cuts were more pronounced in the US Gulf Coast than in the mid-continent, where refiners increased their runs. The pipeline system connecting the US Gulf Coast with the mid-continent was overbooked for August, following a decline in stocks in the latter area. On the US Gulf Coast, however, crude was building up, as transatlantic light sweet crude was offered at steep discounts to WTI. West African crudes kept moving to the USA, after the transatlantic arbitrage became more favourable. For heavy crudes, there was a mixed picture, where most of the exports of Basrah Light were heading to the US Gulf and West Coast, thereby putting pressure on prices. However, a cut of 70,000 b/d in Mexican production raised the prices of Canadian heavy crudes. Asphalt demand also increased interest in heavy crudes.

In Europe, the high price of dated Brent at the beginning of the month was caused by a buying spree by a major; however, as soon as the buying stopped, prices tumbled, as fundamentals reasserted themselves. The only factor that supported other North Sea grades was a shortfall of 280,000 b/d in August from the seven main North Sea crude systems.

In the Mediterranean, Russian Urals

Table A: Monthly average spot quotations of OPEC Reference Basket and selected crudes including differentials *$/b*

	June 2001	July 2001	Year-to-date average 2000	Year-to-date average 2001
Reference Basket	**26.10**	**23.73**	**26.44**	**24.79**
Arabian Light	26.17	24.04	25.81	24.41
Dubai	25.86	23.49	24.92	24.22
Bonny Light	28.06	24.85	27.25	26.29
Saharan Blend	28.16	24.95	27.43	26.56
Minas	27.86	25.59	27.52	26.33
Tia Juana Light	22.30	20.55	25.36	21.95
Isthmus	24.25	22.65	26.79	23.80
Other crudes				
Brent	27.96	24.64	27.07	26.23
WTI	27.67	26.50	29.00	28.06
Differentials				
WTI/Brent	–0.29	1.86	1.93	1.83
Brent/Dubai	2.10	1.15	2.15	2.01

1. *This section is based on the OPEC Monthly Oil Market Report prepared by the Research Division of the Secretariat — published in mid-month and containing up-to-date analysis, additional information, graphs and tables. Researchers and other readers may download the publication in PDF format from our Web site (www.opec.org), provided OPEC is credited as source for any usage.*
2. *An average of Saharan Blend, Minas, Bonny Light, Arabian Light, Dubai, Tia Juana Light and Isthmus.*

continued to benefit from the absence of Iraqi crude, especially since most Kirkuk cargoes were expected to head to the USA after exports were re-established.

Far Eastern markets

Light sweet Australian crudes were depressed because of weak naphtha demand, and middle distillate-rich Tapis came under pressure from weak margins. These margins led to refinery run cuts which affected Middle East crudes, basically Oman, where China's refiners were expected to resell their cargoes in September. Japanese and South Korean refiners were also expected to keep their runs low. Finally, heavy sweet Minas came under pressure, as Japanese utility companies eased demand, because of mild weather in the west and south of the country.

Table B: Selected refined product prices *$/b*

		May 01	June 01	July 01	Change July/June
US Gulf					
Regular gasoline	*(unleaded)*	38.79	30.48	28.21	–2.28
Gasoil	*(0.2%S)*	31.65	31.23	28.59	–2.64
Fuel oil	*(3.0%S)*	16.80	17.59	17.40	–0.19
Rotterdam					
Premium gasoline	*(unleaded)*	39.09	31.73	28.01	–3.72
Gasoil	*(0.2%S)*	31.18	31.06	29.33	–1.73
Fuel oil	*(3.5%S)*	18.23	17.97	17.19	–0.78
Singapore					
Premium gasoline	*(unleaded)*	32.64	26.89	24.36	–2.53
Gasoil	*(0.5%S)*	30.79	30.00	28.54	–1.46
Fuel oil	*(380 cst)*	22.07	20.16	19.19	–0.98

Product markets and refinery operations

Gasoline markets continued their downtrend, paving the way for distillate markets to be in the front seat in July. Gasoil prices exhibited a premium over gasoline in the three major world markets. Despite refinery run cuts, advanced maintenance and much weaker crude prices, margins remained well in negative territory (see **Table B**).

Table C: Refinery operations in selected OECD countries

	Refinery throughput *(m b/d)*			Refinery utilization *(%)*[1]		
	May 01	June 01	July 01	May 01	June 01	July 01
USA	15.84	15.89	15.74	95.8	96.1	95.2
France	1.69R	1.70	1.72	89.2R	89.9	90.7
Germany	2.18R	2.03R	2.18	96.6R	90.0R	96.4
Italy	1.67R	1.70R	1.74	70.9R	72.0R	73.9
UK	1.38R	1.29R	1.46	78.1R	72.8R	82.4
Eur-16[2]	11.70R	11.38R	11.79	85.7R	83.4R	86.4
Japan	3.63	3.50	*na*	73.1	70.5	*na*

1. *Refinery capacities used are in barrels per calendar day.*
2. *European Union plus Norway.*

na *Not available.*
R *Revised since last issue.*

Sources: OPEC Statistics, Argus, Euroilstock Inventory Report/IEA.

US Gulf market

The US Gulf gasoline price deteriorated further in July, falling by $2.28/b to $28.21/b, a level even lower than that of last March (prior to its exceptional 30 per cent rise in April), emphasizing the rule that the market usually over-corrects itself. Gasoline decreased for two months up to the first part of July, driven largely by US gasoline stock-builds to comfortable levels. During the course of the month, however, it recovered on a number of supporting factors. One was the revival of strong demand, linked to the driving season; this exceeded the previous month's level by 3.2 per cent and was 4.3 per cent higher than in July of the previous year, based on preliminary government data for the four-week moving average. The second factor was that the market was less well supplied, as a result of refiners' efforts to advance distillate production, together with refinery run cuts and early maintenance originally scheduled for the autumn, which was spurred by sustained negative margins. The final factor was a combination of dwindling import flows and total US gasoline stocks falling by almost 10m b in July, compared with the June level. Although these factors created a bullish market sentiment, they would not, however, promote any price spikes as the driving season approached its end, unless a dramatic supply shortage occurred. Operating refiners boosted distillate production during July, in order to stockpile heating oil amid a contango market, caused by a market that was 3.7 per cent better supplied, compared with the previous month, on the basis of preliminary four-week data. This offset the rest of refiners slashing runs, refinery outages and turnarounds, resulting in a sharp fall of $2.46/b in the gasoil price, amid steady slightly lower demand and a prevailing uptrend in distillate stocks. The fuel oil price dipped slightly, by 19¢/b, as decent Mexican demand was hit by an influx of Latin American cargoes (see **Table B**).

Refiners' margins worsened in the US Gulf, as the persistently steep falls in product prices, particularly gasoline and gasoil, outpaced the decline in the crude price. Consequently, WTI margins moved deeper into negative territory.

Despite refinery run cuts and maintenance, US refinery throughput was still robust in July, at 15.74m b/d. The corresponding utilization rate was 95.2 per cent, which was barely one percentage

point less than both in the previous month and the year-earlier figure (see **Table C**).

Rotterdam market

In July, despite robust European demand for distillates and fuel oil and emerging gasoline exports to the USA during the last part of the month, product markets remained well supplied. They received further support from a string of refinery restarts; this followed the completion of their turnarounds. A sharp fall in the price of Brent also contributed to bringing product prices down. Gasoline plunged by $3.72/b, amid continued European slack demand. Gasoil lost heavily, by $1.73/b. Fuel oil declined moderately, compared with other products, assisted in part by arbitrage trading to the Asian market, amid continued concern about the quality of Russian supply, with regard to EU standards (see **Table B**).

Brent's margin was helped slightly by its sizeable price losses, but it still had a negative value, hampered by the considerable fall in product markets.

Prompted by the sharp fall in the price of Brent, refinery throughput in Eur-16 (EU and Norway) reached its highest level for three months in July, around 11.79m b/d, an increase of 413,000 b/d over June's figure. Therefore, the refinery utilization rate rose to 86.4 per cent, three percentage points higher than last month but 2.4 per cent lower than the preceding year's level (see **Table C**).

Singapore market

Plummeting crude prices constituted the primary reason for falling product prices in July. However, despite persistent Asian refinery run cuts, abundant supply caused a sharper decline for light product prices than for prices at the heavy end of the barrel, which was alleviated by unabated demand from China. Gasoline plunged by $2.53/b, reflecting a sustained over-supplied market, particularly with many unsold cargoes from China for most of the month. Market sentiment, nonetheless, was bullish at the end of the month, as several Chinese refiners scaled back their exports to August, together with the marginal opening of transpacific arbitrage to the USA. Gasoil fell heavily, by $1.46/b, in the prevailing well-supplied market, despite stock-draws to the lowest level on a yearly basis, that surprised the market. South Korean refineries, the main fuel oil supplier to China, sustained their run cuts and planned outages for late August; this, in turn, forced China to buy heavily from Singapore, limiting the fuel oil price loss to only 98¢/b, despite the sizeable decreases in crude prices (see **Table B**).

A significant fall in Dubai translated into some slight support for its refiners' margin. Nonetheless, the margin remained well in negative territory, depressed by large product price losses.

In Japan, refinery throughput fell further to 3.50m b/d in June, a decline of 130,000 b/d from May. Hence, the equivalent utilization rate also dipped, to 70.5 per cent, which was two percentage points above the previous year's level (see **Table C**).

The oil futures market

NYMEX WTI started the month on a weaker note, on the back of low gasoline demand and news of the resumption of Iraqi exports, which led funds to sell their open positions. However, the stronger product market and a move above the psychological $26/b level, which led banks and traders to buy and turn long, together with the return of Iraqi crude being factored into a statement by Saudi Arabia that a production cut might take place later, gave the market a bullish sentiment. A further upward move came in reaction to a 4m b/d draw on crude inventories, raising the price of the contract to $27.02/b.

During the second week, after an initial jump to $28.21/b, NYMEX WTI experienced a downtrend, which dragged its value to $26.80/b. The sharp rise was due to a technical break, an opportunity to sell at higher values, and there were also rumours that there was not enough wet oil to cover the contracts. However, as news of Iraq's resumption of exports came in the front month, values started dropping. A controversial build in US crude oil inventories added to the pressure on prices, which was enhanced by the slow-down in the US refining industry, a weaker Brent market and concern about the financial situation in Argentina.

The lowest NYMEX contract value for the month was achieved at the end of the third week, when it reached $24.70/b in a continuous downtrend pattern. The first pressure came from a report by the International Energy Agency, which indicated a lower demand outlook. That was followed by a 7m b build in crude oil stocks, according to the US Department of Energy (DoE), which was attributed basically to lower refinery utilization. Funds and other non-commercials increased their speculative short positions, thereby strengthening the bearish outlook. Hence, even a statement by the OPEC President, Dr Chakib Khelil, which was supported by one from Saudi Arabia, to the fact that production cuts of up to 1m b/d were possible, could not lift the market immediately.

In the fourth week, WTI futures moved slightly higher, as repeated statements by OPEC regarding production cuts coincided with the contract expiration. This caused continuous short-covering. Additional support came from a rally in the product market, especially gasoline, where the US DoE's Energy Information Administration showed a record-high, implying gasoline demand of 9.8m b/d. The NYMEX WTI August contract finished the month at $26.35/b.

The tanker market

OPEC area spot-chartering increased by 2.75m b/d in July to a monthly average of 14.04m b/d, helped by the resumption of Iraq's crude oil exports, after the UN Security Council approved the extension of the 'oil-for-food' programme. However, the current volume of OPEC fixtures was 10,000 b/d below that of the corresponding month of 2000. Accordingly, global spot-chartering edged 2.87m b/d higher to a monthly average of 23.43m b/d, which was 800,000 b/d above the year-ago figure. OPEC area's share of global spot-chartering increased by 5.02 percentage points to 59.90 per cent, but this was still 2.15 percentage points below the previous year's level. Spot fixtures from the Middle East displayed a different trend, declining by 340,000 b/d on eastbound long-haul routes, under pressure from weaker Asian demand, while, westbound, they rose by 1.72m b/d. As a result, the share of eastbound long-haul fixtures of

OPEC total fixtures dropped by 9.15 percentage points to 25.33 per cent, while, on westbound routes, it increased by 10.40 percentage points to 20.02 per cent; together, this accounted for 45.35 per cent of total chartering in the OPEC area, which was 1.26 percentage points higher than the figure observed in June. Preliminary estimates of sailings from the OPEC area rose by 2.37m b/d to a monthly average of 23.14m b/d, which was 11.41 percentage points above last month's level. Sailings from the Middle East increased by 2.42m b/d to a monthly average of 16.22m b/d, which was about 70 per cent of the total OPEC figure. Arrivals in the US Gulf Coast, the East Coast and the Caribbean increased in July by 700,000 b/d to a monthly average of 8.56m b/d, while arrivals in North-West Europe and Euromed rose by 1.63m b/d and by 990,000 b/d to 7.20m b/d and 5.21m b/d, respectively. The estimated oil-at-sea was 437m b on July 15, which was 10m b below the level registered at the end of June.

The return of Iraq's crude oil exports in July provided support to the VLCC market in the Middle East, and freight rates rebounded on increased enquiries, especially on westbound routes. However, this improvement was slow, since there was still sufficient tonnage available in the region waiting for employment, and the addition of oil company relets allowed charterers to generally keep downward pressure on the rates.

As a result, VLCC freight rates on the Middle East eastbound long-haul route improved by six points to a monthly average of Worldscale 51, while, on the westbound route, they increased moderately by 16 points to W54, on the back of the increased volume of fixtures to the west. The Suezmax market strengthened on the major trading routes, benefiting from the active VLCC market, which discouraged charterers from combining cargoes, since freight rates were rising. Therefore, rates on the routes from West Africa to the US Gulf Coast and from North-West Europe to the US East Coast increased by 11 points each to monthly average levels of W100 and W102, respectively.

The Aframax markets trading on short-haul routes displayed different trends during July; they were bearish on the Caribbean and across the Mediterranean, while they were balanced on the route to North-West Europe. Rates plunged by 44 points to W133 on the Caribbean to the US East Coast route amid ample tonnage availability and dropped by 17 points to W153 for voyages across the Mediterranean on a lower volume of fixtures. Meanwhile, Aframax freight rates from the Mediterranean to North-West Europe stabilized at around the previous month's level of W139, being only one point lower, helped by the restart of Iraq's oil exports from the port of Ceyhan. Rates for 70–100,00 dwt tankers on the route from Indonesia to the US West Coast reversed the previous month's trend and showed an upward movement, increasing by ten points to W144.

The clean tanker market, which weakened on all the major trading routes for all tanker sizes and freight rates, experienced downward pressure to hit the lowest level so far this year. Rates on the routes from the Middle East and from Singapore to the Far East dropped by 44 points to W218 and 28 points to W259, respectively, due to weaker demand in the Asian market. Across the Mediterranean, rates witnessed the greatest reduction of all, plummeting by 94 points to W193, as abundant vessels, old and modern, were available in the spot market during the month. However, on the route from the Mediterranean to North-West Europe, rates softened by three points to W257. Rates for cargoes to US destinations from the Caribbean and North-West Europe also decreased heavily, by 30 points to W233 and by 75 points to W220, respectively.

World oil demand

Figures for 2000

World

According to the latest available figures, world oil consumption during 2000 grew by 560,000 b/d, or 0.7 per cent, to 75.70m b/d. This latest estimate translates into an upward revision of 20,000 b/d, compared with the figure presented in the previous report. However, due to a slight upward revision of the 1999 total, the volume and percentage change in the 2000 average show minor declines. Specifically, for 2000, the latest available data shows that demand in developing countries grew by only 150,000 b/d to average 18.65m b/d, instead of the 170,000 b/d growth presented in the last report. Within this group, the whole downward revision has been applied equally to 'Other Asia' and the Middle East. On a quarterly basis, world demand has experienced minor upward adjustments of 30,000 b/d for both 1Q and 3Q and of 40,000 b/d for 4Q. The 2Q figure has been revised down by 10,000 b/d. The resulting quarterly averages are now 75.64m b/d, 74.02m b/d, 76.14m b/d, and 76.98m b/d, respectively.

Projections for 2001

For the present year, the projection for world oil demand has once again been revised down, due to a further downward adjustment to the world economic growth rate. Consumption is now estimated to rise by 740,000 b/d, or 1.0 per cent, to average 76.44m b/d. On a regional basis, demand is projected to increase by 120,000 b/d in the OECD and by 380,000 b/d in developing countries, with the remaining 230,000 b/d originating in the 'Other regions' (former CPEs). On a quarterly basis, compared with the year-earlier figure, world demand grew by 0.81 per cent, or 610,000 b/d, to average 76.25m b/d in January–March. For the rest of the year, demand is projected to register further increases of 1.59 per cent in 2Q, 0.30 per cent in 3Q and 1.22 per cent in 4Q.

OECD

Having grown by as little as 0.3 per cent last year, OECD product deliveries are projected to post a similar growth rate in 2001, rising by only 120,000 b/d, to average 47.96m b/d. Almost all the growth is expected to take place in North America, with the lion's share originating in the USA. Deliveries of petroleum products will continue to fall marginally in Western Europe, at a rate of 0.3 per cent, which translates into a 50,000 b/d volumetric decline. Our present estimate calls for a nearly zero growth rate in demand for the OECD Pacific countries. This projection is based on the present situation in the Japanese economy, which continues to show signs of weakening. GDP growth rate estimates for Japan in 2001 have again

Table D: FSU net oil exports *m b/d*

	1Q	2Q	3Q	4Q	Year
1998	2.77	3.02	3.18	3.20	3.04
1999	3.12	3.62	3.52	3.49	3.44
2000	3.97	4.13	4.47	4.01	4.14
2001[1]	4.29	4.50	5.04	4.36	4.55
2002[2]	4.80	5.15	5.14	4.72	4.95

1. Estimate.
2. Forecast.

Table E: OPEC crude oil production, based on secondary sources *1,000 b/d*

	1999	2000	1Q01	June 01*	2Q01	July 01*	July 01/ June 01
Algeria	766	808	825	837	820	842	5
Indonesia	1,310	1,280	1,253	1,221	1,215	1,190	–31
IR Iran	3,509	3,671	3,798	3,671	3,670	3,712	41
Iraq	2,507	2,551	2,207	982	2,274	2,053	1,071
Kuwait	1,907	2,101	2,142	2,023	2,017	2,052	29
SP Libyan AJ	1,337	1,405	1,407	1,367	1,364	1,389	22
Nigeria	1,983	2,031	2,131	2,068	2,051	2,029	–39
Qatar	641	698	716	684	684	698	13
Saudi Arabia	7,655	8,248	8,299	8,007	7,925	8,009	2
UAE	2,077	2,252	2,312	2,198	2,176	2,184	–15
Venezuela	2,808	2,897	2,979	2,833	2,845	2,837	4
Total OPEC	**26,499**	**27,943**	**28,070**	**25,891**	**27,041**	**26,991**	**1,100**

* *Not all sources available.*
Totals may not add, due to independent rounding.

been revised down significantly and now stand at –0.4 per cent; likewise, economic growth rates in South Korea have been revised down systematically.

Inland deliveries of petroleum products in North America in 1Q, according to the latest figures, grew by a solid 2.2 per cent, or 520,000 b/d, to average 24.17m b/d. The USA accounted for almost all the increase in demand in the region, while demand in Canada rose by a marginal 10,000 b/d and in Mexico declined by 40,000 b/d. US product deliveries rose by 2.8 per cent, or 550,000 b/d, to average 20.14m b/d. Demand in Western Europe inched up, posting a rise of 0.1 per cent, or 20,000 b/d, during 1Q. The OECD Pacific countries also displayed 0.9 per cent growth, or 90,000 b/d, in the same period. According to the latest figures, demand for petroleum products grew by 1.5 per cent, or 90,000 b/d, in Japan. It is important to point out that consumption contracted by 0.7 per cent in South Korea, the second-most important regional consumer, during 1Q.

Developing countries

Oil demand in developing countries has again been revised down for 2001. It is now expected to rise by 380,000 b/d, or 2.1 per cent, to average 19.03m b/d for the year. The estimated growth rate in consumption has been lowered for the Asian group of countries from the previous 2.2 per cent to 2.0 per cent. The fundamental factor behind the lower demand outlook is that Asian regional GDP is projected to grow at a lower-than-anticipated rate. These economies are highly export-dependent and are extremely reliant upon the health of their trading partners. The demand growth rate for Latin America has been lowered to 1.0 per cent from the previous 1.9 per cent, to reflect the worsening financial situation in Argentina and the possibility of other economies in the region being affected in due course. While the demand growth rate for Africa has not changed, that of the Middle East has been revised up on the basis of an upward revision of the economic growth rate.

Other regions

Apparent demand in the former CPEs is projected to grow by 230,000 b/d, or 2.5 per cent, to average 9.45m b/d for 2001. Revisions to the trade and production data for 1Q show that apparent FSU demand grew by 7.2 per cent, or 270,000 b/d, compared with the year-earlier figure. The latest assessments indicate that there has been growth of 250,000 b/d, or nearly 6.7 per cent, in 2Q. For the remaining two quarters, we anticipate a decline in apparent consumption, due to a rise in the level of exports that will outpace any gain in production. During 1Q and 2Q, net exports were 320,000 b/d and 360,000 b/d higher than in the corresponding quarters of 2000. High international oil prices, the need for more revenue, in order to service international loans, and the switch to natural gas continue to undermine internal consumption. Indigenous production and trade data for the first three months of the year shows a considerable drop in Chinese apparent consumption. According to the latest figures, apparent demand declined by 7.5 per cent during 1Q. Even though the decline seems huge, one should not forget that this comparison is made with 1Q00, when demand surged by 17 per cent to reach a 1Q record level. The latest available data shows a considerable recovery in total imports for 2Q. Net oil imports registered a significant rise of 52.4 per cent, compared with the previous quarter, and an impressive 40.8 per cent increase, versus 2Q00. Therefore, we are still optimistic about the demand outlook for the rest of the year; nonetheless, due to the size and the importance of China in the overall demand picture, we shall continue to monitor closely further developments.

Preliminary forecasts for 2002

Our preliminary demand forecast has been made based on the following assumptions for the year 2002:

— an expected improvement, on average, in the global economic performance compared with that of the current year, the estimated rate of which has already been revised down successively and significantly;
— average world oil prices of about the same level as that of the first seven months of the current year; and
— the return of weather conditions to

Table F: US onland commercial petroleum stocks[1] *m b*

	Dec 29, 00	March 30, 01	June 29, 01	August 3, 01	Change July/June	August 3, 00
Crude oil (excl SPR)	**288.7**	**303.2**	**310.7**	**308.6**	**–2.1**	**282.5**
Gasoline	193.8	193.0	221.6	207.8	–13.8	208.5
Distillate fuel	116.1	104.0	112.8	121.7	8.9	112.6
Residual fuel oil	34.7	39.8	42.5	40.6	–1.9	35.5
Jet fuel	43.9	40.1	43.0	43.2	0.2	42.9
Unfinished oils	87.1	101.3	90.4	90.0	–0.4	91.6
Other oils	165.8	142.1	191.4	206.6	15.2	195.2
Total	**930.0**	**923.5**	**1,012.4**	**1,017.8**	**5.4**	**968.7**
SPR	541.2	542.3	543.3	543.7	0.4	570.4

1. At end of month, unless otherwise stated. *Source: US/DoE-EIA.*

Table G: Western Europe onland commercial petroleum stocks[1] *m b*

	December 00	March 01	June 01	July 01	Change July/June	July 00
Crude oil	**420.6**	**451.7**	**438.5**	**433.3**	**–5.2**	**436.0**
Mogas	152.9	158.3	155.6	147.7	–8.0	150.7
Naphtha	24.6	22.0	25.1	25.5	0.4	24.9
Middle distillates	342.8	330.8	331.4	322.2	–9.2	335.5
Fuel oils	125.8	123.6	122.2	119.7	–2.5	120.5
Total products	**646.2**	**634.7**	**634.3**	**615.0**	**–19.2**	**631.5**
Overall total	**1,066.7**	**1,086.3**	**1,072.8**	**1,048.4**	**–24.4**	**1,067.6**

1. At end of month, and includes Eur-16. *Source: Argus Euroilstocks.*

Table H: Japan's commercial oil stocks[1] *m b*

	December 00	March 01	May 01	June 01	Change June/May	June 00
Crude oil	**105.1**	**118.7**	**126.1**	**127.3**	**1.2**	**121.4**
Gasoline	12.7	14.6	14.7	14.3	–0.4	14.0
Middle distillates	40.3	31.4	33.8	33.6	–0.2	34.4
Residual fuel oil	20.4	20.2	20.9	19.8	–1.1	18.3
Total products	**73.4**	**66.3**	**69.4**	**67.7**	**–1.7**	**66.7**
Overall total[2]	**178.5**	**185.0**	**195.5**	**195.1**	**–0.4**	**188.1**

1. At end of month. *Source: MITI, Japan.*
2. Includes crude oil and main products only.

normal, compared with a mild winter registered this year. This implies a positive impact on demand in the Northern Hemisphere.

Under these assumptions, world demand is expected to rise by 1.3 per cent, or 1.03m b/d, to 77.47m b/d. This growth level is higher than those experienced in 2000 and expected in 2001. However, this is only a preliminary assessment. It remains subject to further adjustment, as more information becomes available on major factors, such as the economic growth outlook, prices and the weather.

World oil supply

Historical data, including 2000

Production data for 1998, 1999 and 2000 has been revised down by around 40,000 b/d, 20,000 b/d and 10,000 b/d, respectively, compared with the previous report.

Figures for 2001

The 2001 non-OPEC supply figure has been revised up by 40,000 b/d to 46.28m b/d. The quarterly distribution figures for 2Q, 3Q and 4Q have also been revised up, by 100,000 b/d, 60,000 b/d and 10,000 b/d to 45.90m b/d, 46.34m b/d and 46.64m b/d, respectively, while the 1Q figure remains almost unchanged at 46.24m b/d, compared with the last report's figures. The yearly average increase is estimated at 500,000 b/d, compared with the 2000 figure.

Expectations for 2002

According to our preliminary forecast, 2002 is expected to witness an increase in non-OPEC supply of around 890,000 b/d, compared with the estimate for 2001. The expected 2002 quarterly distribution is 47.13m b/d, 46.79m b/d, 47.23m b/d and 47.54m b/d, respectively, resulting in a yearly average of 47.18m b/d. Our preliminary forecast figures are subject to revision, depending on the factors affecting non-OPEC supply.

The FSU's net oil export forecast for 2001 has been revised up by 10,000 b/d to 4.55m b/d, while the 2000 figure remains unchanged at 4.14m b/d, compared with the last report. For the first time, a forecast figure for 2002 is presented and this shows a rise of 400,000 b/d over the 2001 estimated figure, at 4.95m b/d (see **Table D**).

OPEC natural gas liquids

OPEC NGL data for 1999, 2000 and 2001 has been revised up by 10,000 b/d, 40,000 b/d and 20,000 b/d to 2.86m b/d, 2.98m b/d and 3.01m b/d, respectively, compared with the last report's figures. However, the forecast level for 2002 is 3.04m b/d, which is 30,000 b/d higher than the 2001 level.

OPEC NGL production — 1997–2001

	m b/d
1998	**2.78**
1999	**2.86**
2000	**2.98**
1Q01	3.01
2Q01	3.01
3Q01	3.01
4Q01	3.01
2001	**3.01**
Change 2001/2000	0.03
2002	**3.04**
Change 2002/2001	0.03

OPEC crude oil production

Available secondary sources indicate that, in July, OPEC output was 26.99m b/d, which was 1.10m b/d higher than the revised June level of 25.89m b/d. **Table E** shows OPEC production, as reported by selected secondary sources.

Stock movements

USA

US commercial onland oil stocks showed a further marginal build of 5.4m b, or 150,000 b/d, to 1,017.8m b during the period June 29–August 3. Rises of 15.2m b to 206.6m b in 'other oils' and of 8.9m b to 121.7m b in distillates were the main contributers to this build. Meanwhile, there was a considerable draw of 13.8m b to 207.8m b on gasoline and a lesser one on crude, which declined by 2.1m b to 308.6m b on the back of lower refinery runs, due to weak refiners' margins as well as reduced imports. Fuel oil declined by 1.9m b to 40.6m b amid increasing fuel exports, especially to the Asian market, as the transpacific arbitrage from the US Gulf Coast to Singapore was opened. The total stock level was 49.1m b, or about five per cent, above the year-earlier figure (see **Table F**).

During the same period, the US Strategic Petroleum Reserve (SPR) moved up slightly, by 400,000 b to 543.7m b.

Western Europe

Commercial onland oil stocks in Eur-16 registered a contra-seasonal draw in July for the fourth consecutive month, falling significantly by 24.4m b, or 790,000 b/d, to 1,048.4m b, a level not seen since May 2000. Total major product inventories led this draw when they moved down by 19.2m b to 615.0m b, which resulted mainly from a draw of 9.2m b to 322.2m b on distillates, on the back of healthy demand, and of 8.0m b to 147.7m b on gasoline. Due to re-opened Atlantic arbitrage and increasing exports to the US market, sustained by higher European demand. Fuel oil also contributed to this draw, declining by 2.5m b to 119.7m b, due to increasing utility demand in the Mediterranean, as well as higher exports to the Asian market. The considerable upsurge in refinery runs led to a slight draw of 5.2m b to 433.3m b on crude oil, while increasing crude imports, after Iraq resumed its exports, diminished this draw. The overall stock level was 19.2m b, or about two per cent, below last year's figure (see **Table G**).

In June, commercial onland oil stocks in Japan remained almost unchanged, with a negligible decline to 195.1m b. A marginal build of 1.2m b to 127.3m b in crude oil stocks, due to decreasing refinery throughput on seasonal maintenance, was almost counterbalanced by a slight draw of 1.7m b to 67.7m b on total major product inventories — here, residual fuel oil accounted for most of the draw, declining by 1.1m b to 19.8m b due to increasing demand, as well as lower fuel oil output on the back of poor refiners' margins. Total stocks were 7.0m b, or about four per cent, higher than the year-ago level (see **Table H**).

OECD

During 2Q01, OECD commercial onland oil stocks (the USA, Eur-16 and Japan) are estimated to have recorded a moderate seasonal build of 85.5m b, or 940,000 b/d, to 2,280.3m b, compared

with 1Q. This build was due mainly to an increase of 88.9m b, or 980,000 b/d, to 1,012.4m b in US commercial onland oil stocks and, to a lesser degree, to a rise of 10.1m b, or 110,000 b/d, to 195.1m b in Japan's oil stocks, while a contra-seasonal draw of 13.5m b, or 150,000 b/d, to 1,072.8m b in Eur-16 moderated the overall change (see **Table I**).

Table I: Estimated stock movements in OECD[1] in 2Q01 *m b*

	March 01	June 01	Change June 01/March 01 *m b*	*m b/d*
USA	923.5	1,012.4	88.9	0.98
Eur-16	1,086.3	1,072.8	–13.5	–0.15
Japan	185.0	195.1	10.1	0.11
OECD total	**2,194.8**	**2,280.3**	**85.5**	**0.94**

1. Includes USA, Eur-16 and Japan only. Data as at end of month.

Balance of supply/demand

No revisions have been made to the 2000 figures for world oil demand and non-OPEC oil supply, which are estimated at 75.7m b/d and 26.9m b/d, respectively. The yearly average balance also remains unchanged at 1.0m b/d, with quarterly distributions of –400,000 b/d, 2.3m b/d, 1.1m b/d and 1.0m b/d, respectively. The 1999 balance remains unchanged at –1.2m b/d, compared with last month's report (see **Table J**).

For 2001, the non-OPEC supply forecast figure has been revised up by 100,000 b/d to 49.3m b/d and world oil demand down by 100,000 b/d to 76.4m b/d, resulting in an annual difference of 27.1m b/d, down by 200,000 b/d from the last report's figure. The quarterly distributions have been revised up by 100,000 b/d to 27.0m b/d and 200,000 b/d to 26.3m b/d and down by 500,000 b/d to 27.0m b/d and 400,000 b/d to 28.3m b/d, respectively, compared with the last report's figures. The balances for 1Q and 2Q have been revised down by 100,000 b/d each and are estimated at 1.1m b/d and 800,000 b/d, respectively.

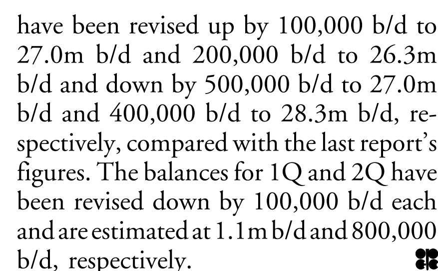


Table J: World crude oil demand/supply balance *m b/d*

	1998	1999	2000	1Q01	2Q01	3Q01	4Q01	2001	1Q02	2Q02	3Q02	4Q02	2002
World demand													
OECD	46.8	47.7	47.8	48.8	46.6	47.8	48.7	48.0	49.4	46.6	47.7	49.5	48.3
North America	23.1	23.8	24.1	24.2	23.8	24.5	24.6	24.3	24.5	24.1	24.6	25.0	24.5
Western Europe	15.3	15.2	15.1	15.2	14.7	15.0	15.3	15.0	15.3	14.5	14.8	15.5	15.1
Pacific	8.4	8.7	8.7	9.4	8.1	8.3	8.8	8.7	9.6	8.0	8.3	9.0	8.7
Developing countries	18.2	18.5	18.7	18.3	19.1	19.3	19.4	19.0	18.9	19.5	19.6	19.9	19.5
FSU	4.3	4.0	3.8	4.0	3.9	3.4	4.0	3.8	3.9	3.7	3.7	4.1	3.9
Other Europe	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.8
China	3.8	4.2	4.7	4.4	4.9	5.2	5.0	4.8	4.7	5.1	5.2	5.1	5.0
(a) Total world demand	**73.8**	**75.1**	**75.7**	**76.2**	**75.2**	**76.4**	**77.9**	**76.4**	**77.7**	**75.6**	**77.1**	**79.4**	**77.5**
Non-OPEC supply													
OECD	21.8	21.3	21.9	21.8	21.5	21.7	21.9	21.7	22.0	21.7	21.9	22.1	21.9
North America	14.5	14.1	14.3	14.2	14.2	14.3	14.4	14.3	14.4	14.5	14.5	14.6	14.5
Western Europe	6.6	6.6	6.7	6.8	6.5	6.6	6.7	6.7	6.8	6.5	6.7	6.8	6.7
Pacific	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8
Developing countries	10.5	10.8	11.0	11.1	10.9	11.1	11.2	11.0	11.2	11.1	11.3	11.4	11.2
FSU	7.3	7.5	7.9	8.3	8.4	8.4	8.4	8.4	8.7	8.8	8.9	8.9	8.8
Other Europe	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
China	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Processing gains	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Total non-OPEC supply	44.5	44.6	45.8	46.2	45.9	46.3	46.6	46.3	47.1	46.8	47.2	47.5	47.2
OPEC NGLs	2.8	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
(b) Total non-OPEC supply and OPEC NGLs	**47.3**	**47.4**	**48.8**	**49.3**	**48.9**	**49.3**	**49.7**	**49.3**	**50.2**	**49.8**	**50.3**	**50.6**	**50.2**
OPEC crude oil production[1]	27.8	26.5	27.9	28.1	27.0								
Total supply	75.0	73.9	76.7	77.3	76.0								
Balance[2]	1.2	-1.2	1.0	1.1	0.8								
Closing stock level (outside FCPEs) *m b*													
OECD onland commercial	2698	2446	2527	2515	2592								
OECD SPR	1249	1228	1210	1210	1211								
OECD total	3947	3675	3737	3725	3803								
Other onland	1056	983	999	996	1017								
Oil on water	859	808	864	907	866[e]								
Total stock	**5861**	**5466**	**5600**	**5629**	**5686**								
Days of forward consumption in OECD													
Commercial onland stocks	57	51	53	54	54								
SPR	26	26	25	26	25								
Total	83	77	78	80	80								
Memo items													
FSU net exports	3.0	3.4	4.1	4.3	4.5	5.0	4.4	4.5	4.8	5.2	5.1	4.7	5.0
[(a) — (b)]	26.5	27.7	26.9	27.0	26.3	27.0	28.3	27.1	27.6	25.8	26.8	28.8	27.3

Note: Totals may not add up due to independent rounding. *e Estimated.*
1. Secondary sources.
2. Stock change and miscellaneous.

***Table J** above, prepared by the Secretariat's Energy 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 One** and **Two** on page 40, while **Graphs One and Two** (on pages 39 and 41) show the evolution on a weekly basis. **Tables Three to Eight,** and the corresponding graphs on pages 42–47, show the evolution of monthly average spot prices for important products in six major markets. (Data for Tables 1–8 is provided by courtesy of Platt's Energy Services).*

Graph 1:
Evolution of spot prices for selected OPEC crudes, April to July 2001

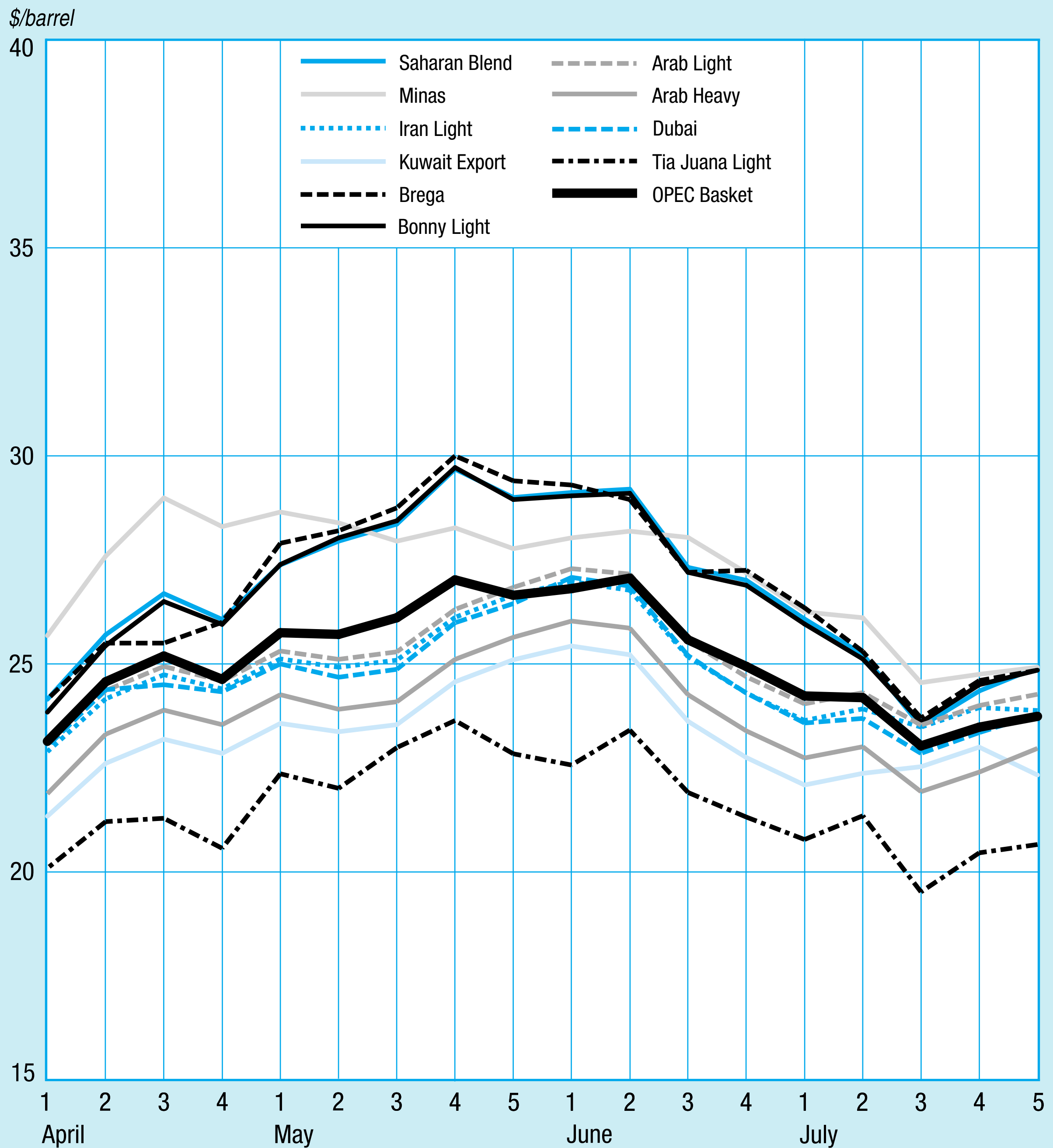


Table 1: OPEC spot crude oil prices, 2000–2001

($/b)

Member Country/ type of crude *(API°)*	2000 Aug 5Wav	Sept 4Wav	Oct 5Wav	Nov 4Wav	Dec 4Wav	2001 Jan 5Wav	Feb 4Wav	Mar 4Wav	Apr 4Wav	May 5Wav	June 4Wav	July 1W	2W	3W	4W	5W	5Wav
Algeria																	
Saharan Blend *(44.1)*	29.25	33.18	31.19	33.06	26.11	26.08	27.80	24.82	25.65	28.47	28.16	26.08	25.23	23.50	24.35	24.92	24.82
Indonesia																	
Minas *(33.9)*	30.33	33.36	32.30	31.07	24.87	24.03	25.62	25.64	27.64	28.21	27.86	26.25	26.11	24.55	24.75	24.92	25.32
IR Iran																	
Light *(33.9)*	27.12	30.45	30.42	29.75	22.66	22.63	24.65	23.58	24.05	25.58	25.80	23.64	23.92	23.48	23.95	23.88	23.78
Iraq																	
Kirkuk *(36.1)*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Kuwait																	
Export *(31.4)*	26.21	29.05	28.87	28.20	21.11	21.08	23.10	22.03	22.50	24.03	24.25	22.09	22.37	22.53	23.00	22.33	22.47
SP Libyan AJ																	
Brega *(40.4)*	29.44	32.64	30.98	32.99	25.40	25.93	27.79	24.69	25.54	28.85	28.18	26.35	25.30	23.70	24.60	24.85	24.88
Nigeria																	
Bonny Light *(36.7)*	29.06	32.65	30.67	32.86	25.47	25.43	27.40	24.35	25.43	28.51	28.06	25.96	25.12	23.60	24.50	24.85	24.81
Saudi Arabia																	
Light *(34.2)*	27.12	30.60	30.17	29.81	22.65	22.31	24.82	23.77	24.24	25.77	26.17	24.04	24.31	23.53	24.00	24.27	24.03
Heavy *(28.0)*	25.52	28.00	28.21	27.94	20.83	20.74	23.32	22.57	23.15	24.60	24.88	22.74	23.01	21.93	22.40	22.97	22.61
UAE																	
Dubai *(32.5)*	26.79	30.05	30.57	30.25	22.27	22.56	24.79	23.67	24.06	25.40	25.86	23.58	23.69	22.85	23.35	23.79	23.45
Venezuela																	
Tia Juana Light[1] *(32.4)*	26.84	29.33	28.34	30.01	23.11	23.18	22.79	21.08	20.79	22.77	22.30	20.78	21.35	19.52	20.46	20.66	20.55
OPEC Basket[2]	**28.30**	**31.48**	**30.42**	**31.22**	**24.13**	**24.06**	**25.41**	**23.70**	**24.38**	**26.25**	**26.10**	**24.23**	**24.19**	**23.03**	**23.48**	**23.74**	**23.73**

Table 2: Selected non-OPEC spot crude oil prices, 2000–2001

($/b)

Country/ type of crude *(API°)*	2000 Aug 5Wav	Sept 4Wav	Oct 5Wav	Nov 4Wav	Dec 4Wav	2001 Jan 5Wav	Feb 4Wav	Mar 4Wav	Apr 4Wav	May 5Wav	June 4Wav	July 1W	2W	3W	4W	5W	5Wav
Gulf Area																	
Oman Blend *(34.0)*	27.24	30.55	29.88	28.97	22.76	22.43	24.29	23.26	23.82	25.55	25.53	23.49	23.94	23.20	23.65	23.76	23.61
Mediterranean																	
Suez Mix *(Egypt, 33.0)*	26.24	28.59	26.18	29.06	21.11	22.09	22.61	19.73	21.58	24.56	23.83	22.20	22.20	20.00	20.90	21.55	21.16
North Sea																	
Brent *(UK, 38.0)*	29.74	32.94	30.86	32.67	25.07	25.60	27.30	24.42	25.37	28.35	27.96	25.99	24.91	23.40	24.30	24.69	24.66
Ekofisk *(Norway, 43.0)*	28.57	32.75	30.77	32.66	25.50	25.51	27.49	24.34	25.38	28.45	27.59	25.68	24.81	23.30	24.25	24.69	24.55
Latin America																	
Isthmus *(Mexico, 32.8)*	28.75	31.19	29.73	31.47	24.40	24.80	24.63	22.60	22.86	24.62	24.25	22.90	23.52	21.62	22.54	22.76	22.67
North America																	
WTI *(US, 40.0)*	31.04	34.05	33.00	34.65	28.39	29.42	29.48	27.27	27.37	28.60	27.67	26.40	27.44	25.60	26.25	26.98	26.53
Others																	
Urals *(Russia, 36.1)*	27.00	30.30	28.04	31.23	24.06	24.40	24.78	21.72	23.60	26.46	25.60	23.88	23.29	22.00	22.95	23.26	23.08

1. *Tia Juana Light spot price = (TJL netback/Isthmus netback) x Isthmus spot price.*
2. ***OPEC Basket**: an average of Saharan Blend, Minas, Bonny Light, Arabian Light, Dubai, Tia Juana Light and Isthmus.*

Kirkuk ex Ceyhan; 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 Oilgram Price Report; Reuters; Secretariat's calculations.

Graph 2:
Evolution of spot prices for selected non-OPEC crudes, April to July 2001

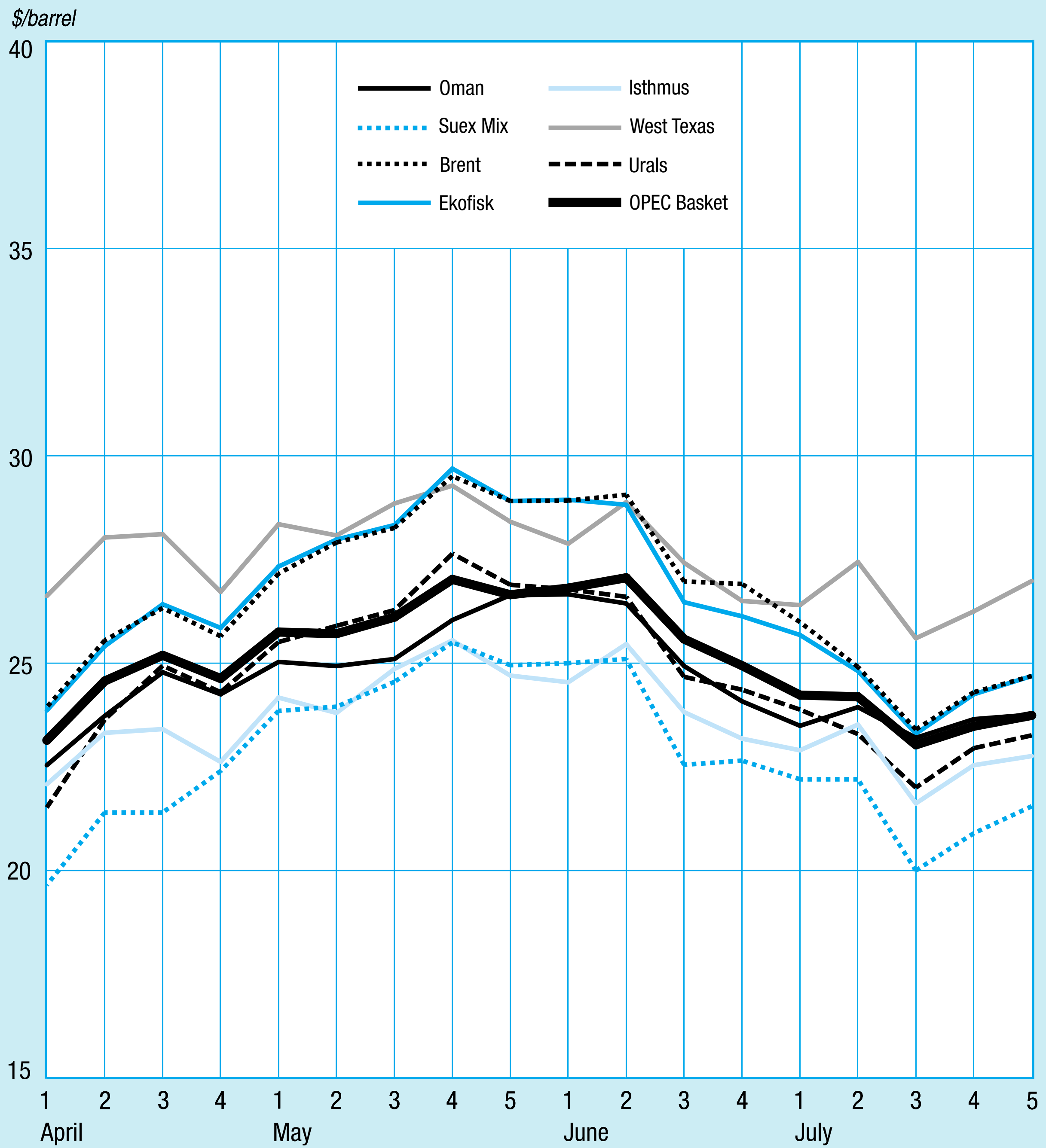


Table 3: North European market — bulk barges, fob Rotterdam *($/b)*

1999	naphtha	regular gas unleaded 87	premium gas unleaded 95	gasoil	jet kero	fuel oil 1%S	fuel oil 3.5%S
July	20.38	21.66	22.69	19.97	22.35	14.13	14.05
August	22.34	25.51	26.39	22.22	24.42	16.97	16.76
September	23.21	25.83	26.75	24.29	26.41	17.77	17.53
October	24.78	25.88	26.61	24.19	26.04	19.16	18.78
November	25.54	27.20	27.72	26.77	29.32	19.40	19.15
December	24.73	28.41	28.93	28.18	33.07	19.69	18.67
2000							
January	27.41	27.81	28.23	28.96	32.24	19.85	18.83
February	29.87	31.63	32.32	29.85	32.72	21.52	19.81
March	31.06	35.71	36.27	30.28	34.01	22.67	22.12
April	24.83	32.90	33.42	28.23	32.81	19.44	18.12
May	28.39	37.01	38.99	29.87	32.07	20.02	18.70
June	30.41	40.57	44.28	31.40	34.40	23.79	21.23
July	29.89	36.51	37.67	33.02	36.07	24.13	19.79
August	29.79	34.82	36.20	36.46	38.69	21.47	19.69
September	33.28	36.87	37.70	42.09	43.84	24.29	23.04
October	33.15	34.72	35.28	40.06	43.64	27.06	23.82
November	32.51	32.72	33.46	40.68	43.61	25.61	22.18
December	29.27	27.77	28.05	34.25	37.50	23.24	18.31
2001							
January	27.36	29.44	29.85	30.15	32.03	20.54	15.48
February	29.23	32.11	32.49	30.88	33.41	20.48	18.21
March	27.19	30.69	31.52	29.38	31.72	20.56	17.58
April	27.86	36.47	37.57	30.37	32.45	20.49	17.05
May	29.71	37.93	39.09	31.18	34.17	20.48	18.21
June	27.21	30.27	31.73	31.06	33.69	19.23	17.97
July	22.28	27.06	27.86	29.33	31.55	17.97	17.19

Sources: Until September 2000 Platt's Oilgram Price Report & Platt's Global Alert; as of October 2000 Reuters. Prices are average of available days.

Graph 3: North European market — bulk barges, fob Rotterdam

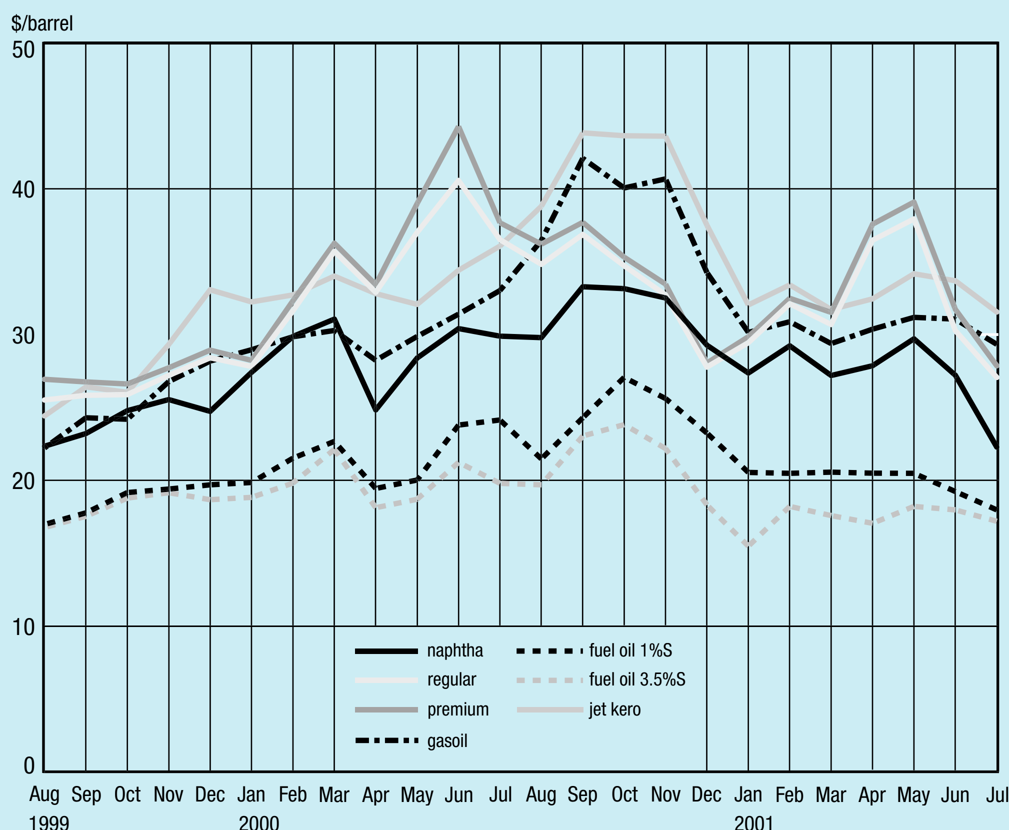


Table 4: South European market — bulk cargoes, fob Italy *($/b)*

1999	naphtha	gasoline premium unleaded 95	gasoil	jet kero	fuel oil 1%S	fuel oil 3.5%S
July	19.45	23.12	19.06	21.04	14.26	12.65
August	21.45	27.05	21.81	22.73	17.08	15.48
September	22.37	26.90	23.36	25.18	17.34	16.55
October	23.88	26.46	23.56	24.51	18.42	17.65
November	24.68	27.77	26.25	27.67	17.76	17.53
December	23.83	28.82	27.86	32.52	18.23	17.44
2000						
January	26.26	27.55	28.06	31.43	20.48	17.85
February	28.57	32.11	29.97	31.28	22.12	19.05
March	29.65	36.27	29.63	32.31	22.40	21.27
April	23.41	32.77	26.69	31.16	19.28	17.09
May	27.01	38.38	29.15	29.67	20.52	16.51
June	28.93	44.06	30.14	31.99	24.50	19.95
July	28.26	38.25	32.92	34.18	23.20	18.76
August	28.14	36.67	36.09	36.60	20.85	17.85
September	31.58	37.87	41.97	41.89	25.00	21.49
October	32.48	37.20	41.53	41.85	27.16	23.58
November	32.47	33.57	40.44	40.33	24.71	19.47
December	27.74	27.79	34.92	35.99	23.46	17.96
2001						
January	26.35	28.76	27.32	28.73	20.13	14.35
February	26.04	31.89	31.32	29.11	18.80	16.86
March	24.13	30.53	27.55	27.89	18.39	16.28
April	27.07	36.43	29.00	28.28	19.23	14.96
May	29.54	39.45	29.37	29.72	19.39	15.84
June	27.15	32.21	30.98	29.40	17.71	15.89
July	21.95	25.55	27.77	27.15	17.73	15.59

Sources: Until September 2000 Platt's Oilgram Price Report & Platt's Global Alert; as of October 2000 Reuters. Prices are average of available days.

Graph 4: South European market — bulk cargoes, fob Italy

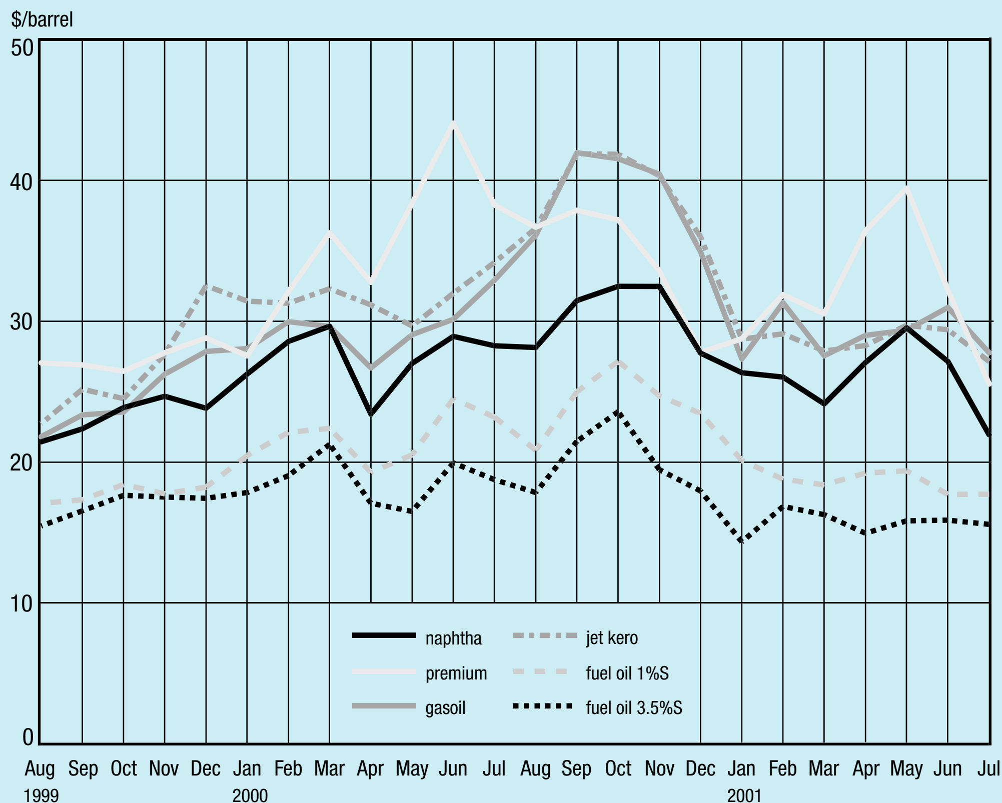


Table 5: US East Coast market — New York *($/b, duties and fees included)*

	gasoline			fuel oil		
1999	**regular unleaded 87**	**gasoil**	**jet kero**	**0.3%S LP**	**1%S**	**2.2%S**
July	24.30	20.77	22.56	18.60	16.39	14.65
August	26.64	22.79	24.51	21.11	18.62	17.24
September	28.67	25.04	26.66	22.22	19.48	18.85
October	26.13	24.27	25.76	22.00	19.44	18.75
November	28.87	26.90	28.78	22.73	19.52	18.95
December	29.35	27.91	30.92	24.88	19.21	18.70
2000						
January	29.41	34.21	39.42	30.08	21.76	20.42
February	33.91	34.64	35.50	31.74	22.90	21.22
March	37.10	32.01	34.31	27.07	21.06	20.87
April	30.35	30.16	32.20	26.81	20.98	19.85
May	37.17	31.39	33.26	28.66	24.59	21.86
June	40.12	32.62	33.69	30.69	27.11	23.20
July	36.04	32.53	34.42	29.28	24.44	22.20
August	36.33	37.17	38.59	29.48	24.50	21.57
September	39.90	41.25	43.80	37.21	29.42	25.39
October	39.83	41.04	42.86	36.86	29.51	25.96
November	39.56	43.46	45.52	35.43	28.66	25.26
December	30.96	39.52	40.97	34.59	25.63	22.04
2001						
January	34.81	35.51	36.03	33.09	25.40	22.34
February	34.68	32.99	34.90	31.51	23.38	19.73
March	32.96	31.12	32.91	27.61	23.31	20.30
April	39.78	32.83	33.92	27.82	22.80	17.47
May	39.06	32.48	35.60	27.84	23.09	18.58
June	30.07	31.74	32.92	24.89	20.22	17.64
July	28.69	29.31	30.10	23.71	19.33	16.72

Sources: Until September 2000 Platt's Oilgram Price Report & Platt's Global Alert; as of October 2000 Reuters. Prices are average of available days.

Graph 5: US East Coast market — New York

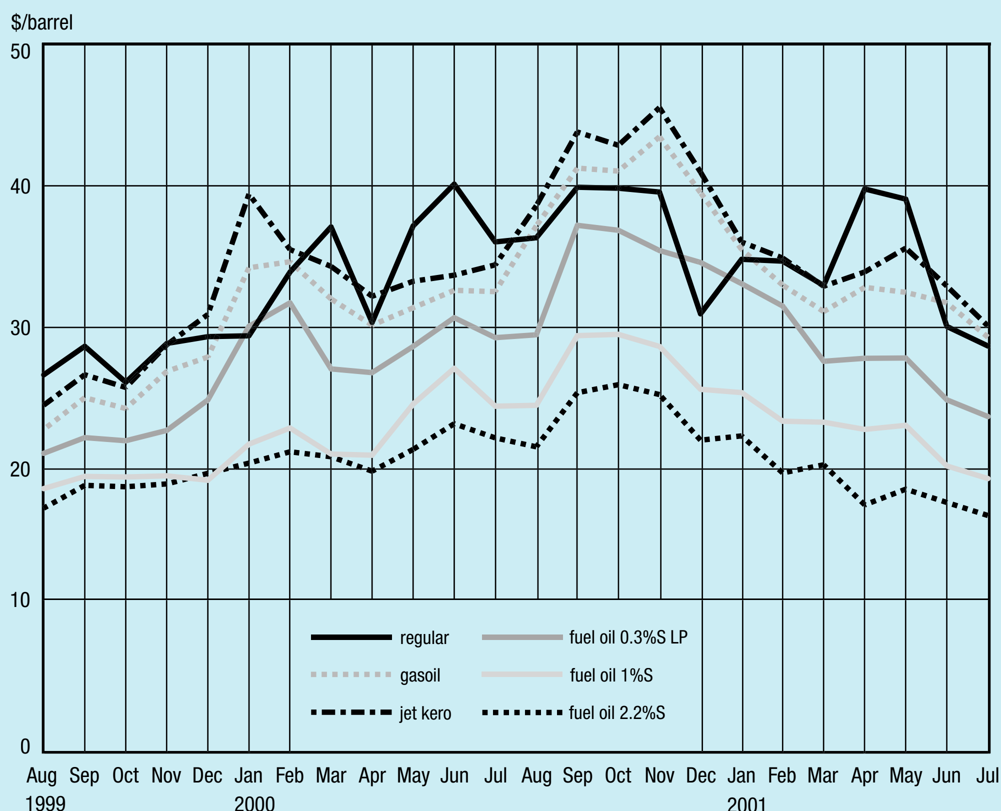


Table 6: Caribbean cargoes —fob *($/b)*

1999	naphtha	gasoil	jet kero	fuel oil 2%S	fuel oil 2.8%S
July	21.60	20.45	22.12	13.68	12.91
August	23.50	22.65	24.57	16.45	15.95
September	25.09	24.54	26.18	18.34	18.13
October	23.16	23.83	25.32	18.20	17.91
November	26.23	26.31	28.01	18.45	17.88
December	25.96	27.38	29.93	18.20	17.87
2000					
January	28.17	30.61	32.85	19.82	18.46
February	33.52	31.85	32.95	20.57	19.36
March	32.74	30.82	33.01	20.17	19.70
April	28.25	29.44	30.74	19.15	18.50
May	32.59	31.11	31.84	21.16	19.39
June	36.24	32.27	32.78	22.27	21.40
July	31.06	32.35	33.38	20.84	19.67
August	32.92	36.63	37.80	19.78	18.54
September	35.32	41.01	42.78	23.59	20.46
October	34.77	39.90	41.32	23.95	21.71
November	34.37	40.93	43.64	22.96	17.96
December	29.73	34.63	36.40	19.89	16.90
2001					
January	34.10	35.56	36.17	20.21	16.48
February	29.87	31.85	32.42	18.14	16.31
March	28.63	28.97	30.11	18.26	17.16
April	33.60	30.51	31.37	15.81	15.03
May	29.65	33.07	34.46	17.50	17.10
June	25.85	31.58	32.13	16.64	16.27
July	25.06	28.84	29.57	15.54	14.45

Sources: Until September 2000 Platt's Oilgram Price Report & Platt's Global Alert; as of October 2000 Reuters. Prices are average of available days.

Graph 6: Caribbean cargoes —fob

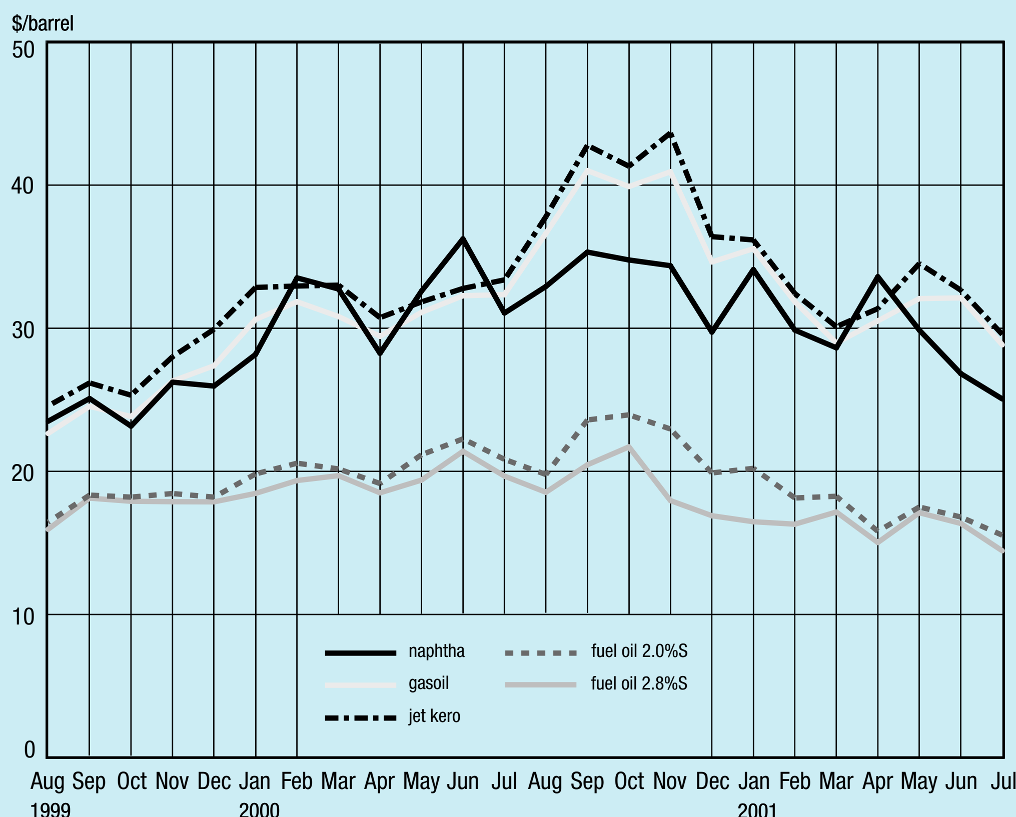


Table 7: Singapore cargoes

($/b)

1999	naphtha	gasoline premium unleaded 95	gasoil	jet kero	fuel oil 0.3%S	fuel oil 180C	fuel oil 380C
July	20.75	22.63	19.22	22.10	15.50	14.45	14.46
August	23.16	25.99	21.30	24.81	17.23	17.03	17.27
September	24.49	26.86	23.04	26.37	18.91	18.42	18.83
October	24.70	24.78	23.60	25.90	20.46	19.98	20.46
November	25.86	25.88	24.74	27.56	21.23	20.68	21.19
December	25.03	25.46	25.63	29.53	21.47	20.47	20.98
2000							
January	25.02	28.36	28.14	31.30	21.58	19.66	19.95
February	27.09	31.16	29.90	31.14	23.43	20.76	21.15
March	29.08	32.58	32.94	32.37	25.85	24.66	24.69
April	25.01	28.01	26.73	27.99	24.54	22.13	22.39
May	27.27	31.90	28.12	29.09	26.62	23.62	23.60
June	28.13	33.08	30.69	31.23	26.78	25.30	25.31
July	27.80	36.05	31.86	33.25	25.45	22.00	22.09
August	30.19	38.31	37.46	37.98	27.08	21.57	21.64
September	34.53	35.05	40.13	42.21	28.44	24.81	24.87
October	33.50	33.03	38.96	43.30	26.77	26.35	26.55
November	30.43	32.96	34.85	39.88	26.50	24.36	24.49
December	25.52	29.97	29.61	32.92	24.45	19.78	19.74
2001							
January	25.50	30.02	28.41	29.70	22.54	18.37	17.99
February	27.83	31.33	27.57	30.48	22.68	19.91	19.69
March	27.43	29.88	26.83	28.72	22.43	20.08	20.04
April	28.14	32.76	29.80	30.25	22.60	20.48	20.47
May	28.89	32.64	30.79	30.74	23.72	22.02	22.07
June	27.57	26.89	30.00	30.84	25.11	20.26	20.16
July	24.38	24.36	28.54	28.93	24.08	19.03	19.19

Sources: Until September 2000 Platt's Oilgram Price Report & Platt's Global Alert; as of October 2000 Reuters. Prices are average of available days.

Graph 7: Singapore cargoes

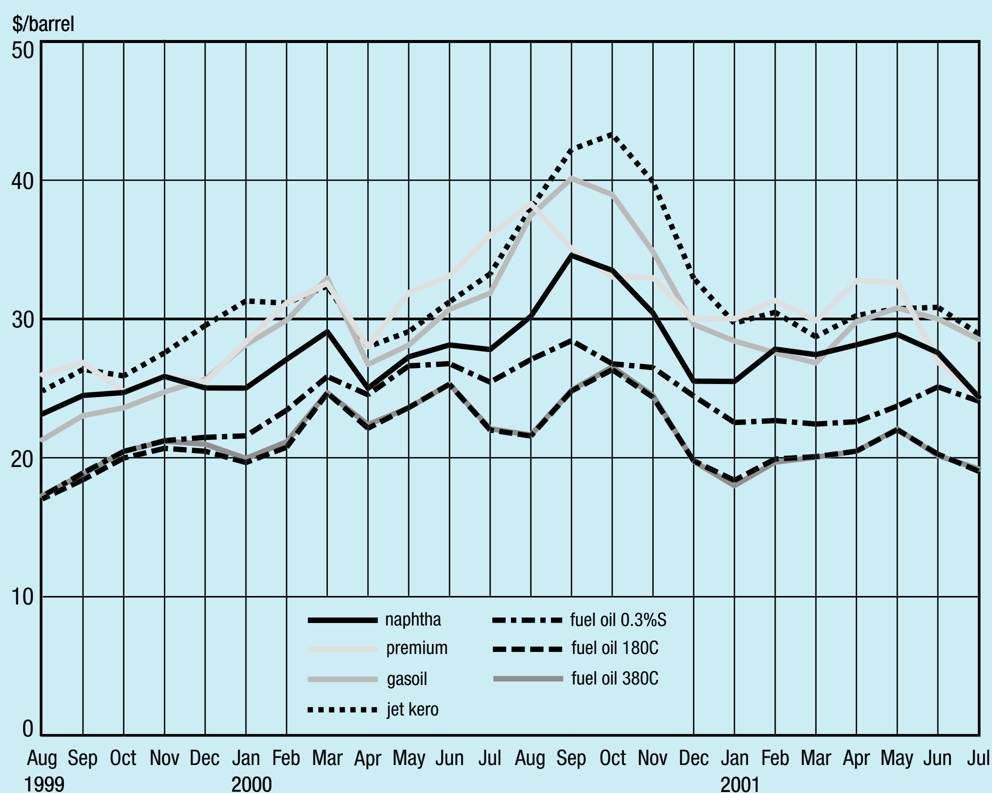
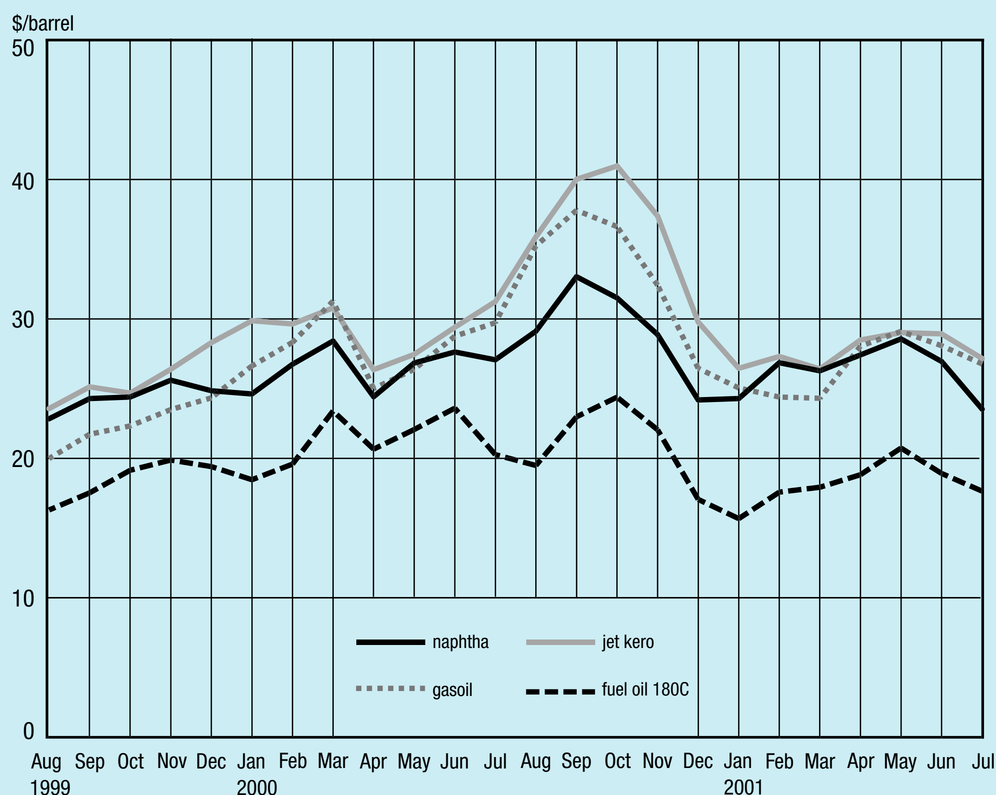


Table 8: Middle East— fob *($/b)*

1999	naphtha	gasoil	jet kero	fuel oil 180C
July	20.49	17.91	20.86	13.87
August	22.84	19.99	23.57	16.30
September	24.29	21.73	25.13	17.53
October	24.40	22.33	24.68	19.15
November	25.61	23.50	26.39	19.88
December	24.85	24.34	28.30	19.41
2000				
January	24.62	26.63	29.87	18.47
February	26.75	28.32	29.64	19.59
March	28.42	31.28	30.79	23.40
April	24.42	25.01	26.36	20.66
May	26.84	26.39	27.46	22.06
June	27.63	28.76	29.40	23.60
July	27.07	29.73	31.24	20.27
August	29.12	35.24	35.88	19.49
September	33.03	37.79	40.01	22.98
October	31.51	36.62	40.97	24.39
November	28.88	32.42	37.38	22.05
December	24.19	26.46	29.73	17.06
2001				
January	24.29	25.05	26.38	15.68
February	26.86	24.40	27.31	17.58
March	26.28	24.31	26.41	17.93
April	27.42	28.05	28.49	18.83
May	28.57	29.11	29.02	20.74
June	26.95	28.08	28.93	18.92
July	23.53	26.77	27.16	17.65

Sources: Until September 2000 Platt's Oilgram Price Report & Platt's Global Alert; as of October 2000 Reuters. Prices are average of available days.

Graph 8: Middle East — fob



'New African Initiative' to be priority for next year's G8-Summit

Algiers — Algerian President, Abdelaziz Bouteflika, and his Nigerian counterpart, Olusegun Obasanjo, travelled to Genoa, Italy last month with South Africa's President, Thabo Mbeki and Senegalese President, Abdoulaye Wade, to meet with members of the Group of Eight industrialized countries, ahead of the G-8 Summit.

An Algerian Presidential communiqué noted that the four African leaders met in Rome to finalize a document on the 'New African Initiative', which was submitted to the G-8 Summit.

The report aims at the integration of African economies in world trade and calls for the cancellation, or at least the reduction, of Africa's debt burden, valued at around $350 billion.

The final communiqué from the G-8 Summit in Genoa expressed willingness to address the issue of integrating the world's poorer countries into the process of globalization.

"We are determined to make globalization work for all our citizens and especially the world's poor. Drawing the poorest countries into the global economy is the surest way to address their fundamental aspirations," the communiqué said.

The G8 leaders also promised to make Africa a priority for next year's Summit, which will be held in Canada.

Algeria, Iraq to set up free trade area "as soon as possible"

Algiers — Algeria and Iraq have agreed on setting up a free trade area with an accord due to be signed "as soon as possible," according to official sources in the Algerian capital last month.

The announcement was made at the end of a joint commission held between the two countries, which was co-chaired by the Algerian Minister of Industry and Restructuring, Abdelmadjid Menasra, and the Iraqi Minister of Transportation and Telecommunications, Ahmed Mortadha Khalil.

The statement sanctioning the purpose of the meeting included a number of recommendations related to economic co-operation and the means to extend bilateral exchanges.

The signing of the accord establishing the free trade area would be done as quickly as possible, Menasra indicated.

The Iraqi Minister noted that documents signed during the meeting would contribute towards reinforcing bilateral co-operation on the basis of a more sustained vision.

According to the statement, the two sides had highlighted the necessity of boosting partnership in the hydrocarbon sector, based on an outline defined in Baghdad in May this year by the Algerian Minister of Energy and Mines and President of the OPEC Conference, Dr Chakib Khelil, and the Iraqi Minister of Oil, Dr Amer Mohammed Rasheed.

Algiers and Baghdad have indicated additional interest in co-operating in the industrial sector and have agreed to the resumption of talks related to a joint lorry assembly plant, to be set up in the Iraqi capital.

The two sides also decided on increasing bilateral trade exchanges through the organization of trade fairs in both countries.

Interest rates in Venezuela forecast to drop later this year

Caracas — There will be a significant decrease in Venezuelan interest rates later this year, which will trigger a demand in credit in the country, according to the Director of the Venezuelan Central Bank, Domingo Maza Zavala.

Zavala said he was hoping there would be a cut in lending rates on loans for credit demand to boost production and investment.

"We also hope there is an increase in the borrowing rates — those paid on deposits. This way, it will not affect the trading market," he said.

Zavala noted that the resources of the country's investment fund for macroeconomic stabilization could amount to more than $7.0 billion by the end of the year.

However, such an estimate required stability in oil prices, he pointed out.

"If crude prices of more than $22/barrel do not decrease, the investment fund would easily go over the $7.0bn mark," he added.

Qatari non-oil sector to register growth this year — bank

Doha — After two years of insignificant performance, Qatar's non-oil sector promises to register growth this year, according to the Qatar National Bank (QNB).

The bank's half-year *Economic Review* forecast growth for the construction sector, in view of the government's budget surplus, the *Gulf Times* newspaper reported last month.

The bank pointed out that the surplus was the first the country had experienced in 15 years.

The report said the outlook for the oil sector remained good, despite a fall in crude prices this year and another likely drop forecast for the third quarter.

But the bank's analysts stressed that oil prices were highly unlikely to fall below $22/barrel. Last year, Qatari oil fetched on average $27.30/b, compared with $17.60/b in 1999.

At the time of reporting, the contribution of the oil and gas sectors to the nation's GDP was 58.3 per cent.

The bank observed that the Qatari liquefied natural gas (LNG) average price showed an almost 80 per cent increase over last year, fetching $5.8 per million British thermal units, compared with $3.25 in 1999.

The review said the fall in the price of oil would be more than made up by an increase in exports this year.

In 2001, the country plans to export 725,000 b/d of oil. Last year it exported 696,000 b/d. Qatar's production capacity now stands at 800,000 b/d. This will reach 1.0m b/d by 2005, the report indicated.

The half-year review forecast that LNG exports were projected to go up to 13 million tonnes this year, from 11m t in 2000, while condensate exports were also expected to expand.

Algeria, Saudi Arabia joint commission meets in Algiers

Algiers — The fourth session of the Algeria-Saudi Arabia joint commission opened last month to discuss trade exchanges and to encourage investment in both the countries.

The session was co-chaired by the Algerian Minister of Finance, Mourad Medelci, and the Saudi Arabian Minister of Trade, Oussama Ibn Djaafar Fakih.

According to the Saudi Arabian Minister, the meeting would explore several issues related to investment, trade and the encouragement of bilateral business activities.

Fakih, who was accompanied by a group of Saudi Arabian businessmen interested in investment opportunities in Algeria, added that the Saudi Fund for Development (SDF) was anticipating reinforcing its presence in the North African country to contribute to development projects.

Meanwhile, Algeria's Medelci stressed the need for strengthening bilateral co-operation in the banking and financial sectors, as well as in boosting investment.

During his stay in Algeria, Fakih was also due to hold discussions with his Algerian counterpart, Hamid Temmar, and the Minister of Housing, Abdelmadjid Tebboun.

Qatari Emir visits Venezuela for talks on boosting ties

Caracas — The Emir of Qatar, Sheikh Hamad Bin Khalifa Al-Thani, was due last month to hold a three-day visit and talks with the Venezuelan President, Hugo Chavez, concerning the building of stronger bilateral relations.

"We will take advantage of this visit to work especially on investments we are planning for the exploitation of natural gas, in which Qatar has great experience," Chavez told reporters.

Chavez and his Cabinet of Ministers were scheduled to welcome the Qatari Emir at the Simon Bolivar international airport, following which the two leaders were due to hold a working meeting at the Miraflores Presidential Palace, according to the Venezuelan Foreign Ministry.

Al-Thani first visited Caracas in September last year, when he attended the II Summit of OPEC Heads of State and Government, which was hosted by the Venezuelan President.

Venezuelan Q2 economic growth put at 3.2 per cent

Caracas — Venezuelan Minister of Planning and Development, Jorge Giordani, said last month that his country most likely posted an economic growth rate of 3.2 per cent during the second quarter of this year.

"We have had five consecutive quarters of sustained growth in which the economy grew by an average of 3.2 per cent," he told reporters in the Venezuelan capital.

"We have five quarters (of growth) and there is a possibility that the second quarter of this year (will) be similar," he added.

The Minister said this positive trend in Venezuela's economy had resulted from the government's "consistent economic policy," which was continuing and was aimed at lowering inflation.

The government was not concerned over oil prices because there was still a difference of around two dollars a barrel between the current average price of Venezuela's crude basket and the goal established in the national budget.

"OPEC is defending fair oil prices, that is what we want," said Giordani, noting that world oil prices had already started to rebound.

He noted that another positive aspect of Venezuela's macroeconomic indicators was the high level of the country's international monetary reserves.

Giordani said Venezuela had monetary reserves in the order of about $13.5 billion, in addition to some $6.5bn in the macroeconomic stabilization fund.

Kuwait to build two giant petrochemical plants

Kuwait — Kuwait's Minister of Oil, Dr Adel K Al-Sabeeh, said in a statement last month that his country planned to build two petrochemical plants by the end of 2005 at a total cost of $3.4 billion.

One of the proposed plants, which would cost $2.0bn, would produce 850,000 tonnes/year of ethylene, 450,000 t/y of polyethylene, 650,000 t/y of ethylene glycol, and 70,000 t/y of propylene, the Kuwait News Agency (KUNA) reported.

A leading international company would invest in this plant, while the local partner would be Kuwait's Petrochemical Industries Company (PIC), the Minister said, without naming the foreign concern.

The second plant, also to be partly owned by PIC, would produce 650,000 t/y of paraxylene and 500,000 t/y of styrene. The cost of this plant was put at $1.4bn, the statement said.

Products from both plants would be used in the plastics industry, he noted.

As part of efforts to liberalize the Kuwaiti economy, the private sector would be allowed to own a suitable amount of shares in both projects, Al-Sabeeh pointed out.

Arab Fund grants Algeria $103 million loan

Algiers — The Arab Fund for Economic and Social Development (AFESD) has granted Algeria a loan of $103 million, earmarked for the part-financing of a dam project.

Algerian Minister of Finance, Mourade Medelci, and the fund's General Manager, Abdelatif Youcef El Hamad, signed the loan accord last month.

The loan has been extended over a 22-year period, with a six-year grace period and a rate of interest of 4.5 per cent.

The loan will be used to purchase equipment for the Bouharoun dam, involving the construction of a pumping station and a water transfer unit.

At the signing ceremony, Medelci stressed the importance of the accord, the first of a number of agreements to be finalized for the project, with a projected cost of $350m.

Another loan was to be granted to Algeria by a consortium of Arab funds for the realization of the second phase of the scheme.

El Hamad announced that his fund would also be associated with the second loan, as well as in the financing of other projects under study in Algeria.

These schemes comprised a water desalination unit at Arzew, as well as projects related to the housing and health sectors.

Since 1974, the AFESD has extended credits to Algeria amounting to around $1.0 billion. Algeria is a 10 per cent shareholder in the capital of the Fund.

Venezuelan President names new Minister of Finance

Caracas — Venezuelan President, Hugo Chavez, last month appointed Nelson Merentes as the country's new Minister of Finance, replacing José Rojas, who will become Venezuela's representative to the Inter-American Development Bank (IADB).

Making the announcement, Minister of the Presidential Secretariat, Diosdado Cabello, said Rojas would become Venezuela's permanent representative at the IADB, a post that had remained vacant after Adina Bastidas was named Executive Vice President of the Bolivarian Republic of Venezuela.

Merentes previously served as the country's Deputy Minister of Finance, responsible for regulation and control.

Cabello said the ministerial change was in recognition of work carried out at the Ministry of Finance, and in particular, he paid tribute to Rojas who will be assuming his new post at the IADB.

"A great part of the responsibility that led to the macroeconomic indicators that we have at this moment lay with José Rojas, who is one of the Ministers who had to face one of the most difficult times in Venezuela and had done so without problem," he noted.

Cabello also said that the appointment of Merentes did not mean that there would be any change in the government's economic and fiscal policies.

"Nelson Merentes will continue the policies that had been carried out by José Rojas," Cabello said.

Merentes is a mathematics graduate from the prestigious Caracas-based Central University of Venezuela and holds a doctorate in mathematics from Budapest's Eotvos Lorand University in Hungary. He has also served as a university professor, specializing in mathematics.

Qatar needs $2.5bn for projects —QNB chief

Doha — Qatar will need some $2.5 billion in financing for domestic projects scheduled be carried out over the next two years, according to comments made by Qatar National Bank (QNB) Chief Executive and General Manager, Saeed Bin Abdulla Al-Misnad, last month.

Al-Misnad said some of the major petrochemical units being planned, and the proposed causeway between Qatar and Bahrain, would require huge amounts of funding that could not be carried out entirely by the private sector.

"We will have a good share of these projects," he said at a press conference, which was reported by Qatar's daily English-language *Gulf Times* newspaper.

"But I wish to see private sector participation in these (schemes)," Al-Misnad stressed.

He said QNB was the lead arranger for the Qatar Fertilizer Company (QAFCO) expansion project (QAFCO-IV).

The fertilizer major had struck a deal with QNB and five other leading banks for an eight-and-a-half year term loan of $400 million on a fully underwritten basis.

Al-Misnad said the bank was also participating in RasGas II, which involved the setting up of a new liquefied natural gas train and onshore facilities at the RasGas plant site.

QNB was also participating in the Ras Abu Fontas-B expansion project.

Al-Misnad said the bank's Corporate Banking Division had enhanced its role in participating in major local projects by signing a $44.5m loan facility with the national carrier, Qatar Airways, for its fleet expansion.

The loan provided for the purchase of two wide-bodied aircraft Airbus A300-600, which was of particular significance as it enabled a Qatari company to meet a substantial financing need through a locally-sourced structure, without recourse to external financing.

The bank, Al-Misnad said, was also ready to take on a larger financing arrangement with Qatar Airways to buy six new Airbus A320 aircraft.

On funding contractors, he said guidelines had been set to ensure they spent money properly. The bank would also look

into a concern's ability to repay monies. He said the amount of financing earmarked for contractors was some $1.0 billion annually.

"We now enjoy a relationship with some major and reputed contractors in Qatar. This will continue," he said.

QNB achieved a net profit of $72m in the first six months of this year, up by six per cent compared with the corresponding period last year. Net interest income increased by $9.0m to reach $94m, a 10 per cent rise over the first half of 2000.

Taiwan has $100m of investment in Nigeria

Abuja — Total investment in Nigeria by investors from Taiwan is estimated at $100 million, with 16 companies operating in the manufacturing sector, it was announced in the country's capital last month.

Taiwan's representative in Nigeria, John Liu, disclosed the figure while playing host to journalists and a visiting delegation from Tatung, a leading Taiwanese electronic company.

According to Liu, the trade volume between the two countries reached a value of $466.3m last year, representing a 37.4 per cent increase over the $337.4m recorded in 1999.

Nigeria enjoyed a trade surplus of $191.5m, he noted.

Stating that both countries enjoyed healthy relations, despite the lack of diplomatic ties, he said relations were becoming stronger.

Liu noted that the exchange of visits between investors from the two countries had greatly assisted in consolidating bilateral trade links. Another Taiwanese team was expected to arrive in Nigeria before the end of September.

"I firmly believe it is mutually beneficial for our two countries to strengthen trade and commercial relations, as well as other areas of co-operation," he stressed.

"Trade is presently in Nigeria's favour, due particularly to crude oil, but further investment will assist in Nigeria's desire to improve its economy and reduce unemployment," he added.

The leader of the Taiwanese delegation, Che-jen Chang, said Tatung's two-day visit had revealed enormous investment opportunities in Nigeria.

"We are willing and able to invest in a country like Nigeria, having good market potential," he pointed out.

Chang said the company's management had directed the delegation to investigate Nigeria's investment climate, labour laws and market, culture and natural resources, and electricity supply and tax laws, regarding foreign business.

"We are highly impressed by the market potential in Nigeria. The atmosphere is conducive to foreign investment.

"Tatung intends to establish an operational base in West Africa as one of its global strategies and Nigeria is certainly one of the best countries in the region to be considered," he maintained.

Tatung has an annual turnover of $35 billion and employs 30,000 people to maintain its 700 stores and branches worldwide.

Chang said that a lack of understanding of the country by Taiwanese investors had hindered investment in Nigeria.

He urged the Nigerian government to "do more" to explain the opportunities that existed in the country to the outside world.

Iran, Italy first-quarter trade worth $823m

Rome — The value of Iran-Italy trade amounted to $822.9 million in the first quarter of the current year, according to an official at Italy's National Institute for Statistics.

Quoted by the official Islamic Republic News Agency, IRNA, the source said the value of Italy's imports from Iran during the period was $600.4m, 88 per cent of which was crude oil.

At the same time, Italy's exports to Iran were valued at $222.5m.

Meat, textiles, steel, ironware and agricultural produce, comprised other Italian imports from Iran.

Major Iranian imports from Italy included mechanical and aeronautical equipment, automobile and motorcycle parts, other specialized machinery and petrochemicals.

In June, the Italian institute announced that the value of trade between the two countries between January and February this year stood at $505.8m.

The volume of trade between Iran and Italy rose by 40 per cent in the first two months of the current year.

QAFCO set to become world's largest ammonia, urea producer

Doha — The Qatar Fertilizer Company (QAFCO) signed a letter of intent last month with Germany's Krupp Uhde GmbH for setting up additional ammonia and urea production facilities in the Gulf.

Once QAFCO-IV goes onstream in mid-2004, the firm will be the largest producer of ammonia and urea in the world, according to the *Peninsula* newspaper, quoting a company statement.

The report said the additional plants would have daily production capacities of 3,500 tonnes of ammonia and 2,000 t of urea.

Upon completion, QAFCO's total annual output capacities for ammonia and urea would reach record levels of 2.0 million t and 2.8m t, respectively.

In percentage terms, ammonia output would grow by 50 per cent, while urea output would expand by as much as 65 per cent.

Ammonia and urea are major QAFCO products and much in demand the world over, particularly in Asian countries with huge agrarian economies.

Prices of these fertilizer products have recently gone up substantially, due to a surge in demand.

QAFCO Chairman, Khalifa Al Suwaidi, signed the expansion deal in London early this month.

The total cost of QAFCO-IV has been estimated at $535m, of which $400m has been sought as term loans from various international banks.

The remainder of the funds will come from existing reserves of the company and cash flows accruing from operations.

Krupp Uhde will construct the expansion plants, as well as meet all technical and other requirements.

The company was the lowest bidder for the deal among other international engineering and petrochemical contracting firms, which included Snamprogetti of Italy, and Kellog Brown and Root of the United States.

Krupp Uhde was recently involved in successfully setting up the Qatar Vinyl Company's plant at a cost of $680m at Mesaieed Industrial City in record time.

The project, which studies reveal to be viable, puts into effect the country's economic policy, which focuses on maximum utilization of Qatar's gas resources, expansion of the petrochemicals sector, and economic development.

The last expansion project at QAFCO (QAFCO III) went onstream in 1997.

Algiers, Moscow to hold talks on debt conversion

Algiers — Algiers and Moscow will open discussions later this year on the conversion into investments of Algeria's debt payable to Russia.

Last month it was announced that a meeting on the restructuring of the debt would be held on the sidelines of the Algerian-Russian joint commission, due to meet in Moscow in autumn.

According to official sources in Algiers and Moscow, the Algerian debt, put at around $4.0 billion, would be converted, with a particular focus on the hydrocarbon sector.

The two countries had already reached a preliminary understanding on the matter during a visit paid to Algeria in May by the Deputy Russian Prime Minister, Ilya Klebanov.

During his visit, Klebanov indicated that the debt conversion would be carried out through the setting up of Algerian-Russian companies, primarily in the oil and gas sectors.

Japan imported $5.28bn from Iran last year

Tokyo — Japan imported $5.283 billion worth of goods from Iran last year, according to figures quoted by the official Islamic Republic News Agency (IRNA).

The total represents a 71.91 per cent increase over 1999.

According to an official report, crude oil made up 98 per cent of Japan's imports from Iran last year.

Japan's exports to Iran stood at $574.31 million last year — a 0.50 per cent increase over the figure recorded the previous year. Imports from, and exports to, Iran in 2000 constituted 1.4 and 0.1 per cent of the total value of Japan's global imports and exports, respectively.

Russian envoy pledges support for agreements with Nigeria

Abuja — Russian Chargé d'Affaires, Gennady Petrov, assured Nigeria last month that his country would implement all of the agreements signed during the Nigerian President's visit to Russia earlier this year.

Addressing the media, Petrov said the accords signed by the Nigerian President, Olusegun Obasanjo, could attract investment worth more than $500 million for Nigeria.

Describing Nigeria's Ajaokuta steel plant as "a milestone" in the relations between the two countries, he said talks were continuing on the realization of the goals of the project, stating that Russia would also assist Nigeria in the development of its space programme.

Petrov noted that the Russian President, Vladimir Putin, would visit Nigeria at a date yet to be decided, on the invitation of Obasanjo.

He expressed Russia's support for Nigeria's democratic, economic and political developments, saying relations between the two sides had come a long way and that "even under military rule, Russia found ways of co-operating with Nigeria".

Meanwhile, a press release circulated by the Russian Embassy in Abuja said Russia was sponsoring a new initiative to strengthen strategic stability and global peace.

The release said that continuous consultation on strategic stability should be implemented and initiated by the five permanent members of the United Nations Security Council — Britain, China, France, Russia and the United States.

Saudi exporters win deals with Iraq worth $68m

Riyadh — Saudi Arabian companies won orders worth $68 million in the first half of this year for supplying food and other essential commodities to Iraq under the United Nations 'oil-for-food' programme, it was stated last month.

According to a report released by the Saudi Export Development Centre (SEDC), the Council of Saudi Chambers of Commerce and Industry put the total volume of Saudi Arabian trade with Iraq to date at $667m.

Saudi businessmen said the most common hurdle they had to overcome was the delay in getting the deals approved by the UN committee that scrutinized trade with Iraq under the programme. They pointed out that the committee did not respond to complaints by SEDC in this regard.

SEDC had raised the issue at the annual conference of countries participating in the UN programme in New York in April.

Available exclusively from OPEC:

The **2000 edition** of the **OPEC Annual Statistical Bulletin**, which has established itself as the standard reference work on the oil and gas industries of OPEC Member Countries, is now available exclusively from the Secretariat. Compiled by a team of statistical experts, the ASB contains an unrivalled wealth of data covering the period until end-2000 on the oil and gas sectors of OPEC's 11 Member Countries, as well as comprehensive coverage of the rest of the world.

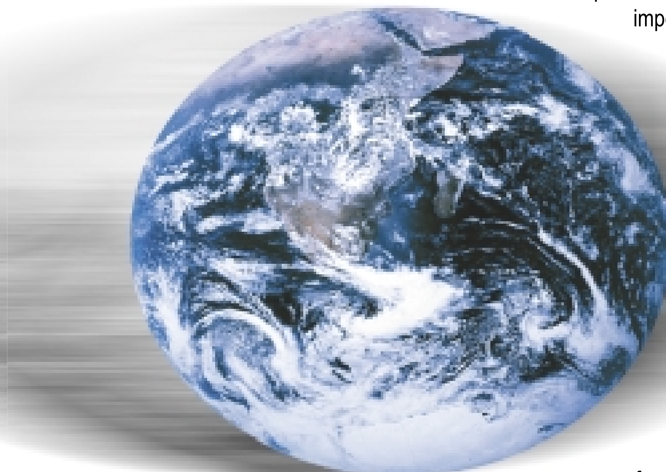
For ease of reference, the ASB is divided into five sections, which are:

1 Summary tables and basic indicators

Basic economic indicators in OPEC Member Countries (GDP, population, trade, etc) from 1980-2000. Side-by-side comparisons of fundamental information on the oil and gas industries of OPEC Member Countries and the rest of the world cover the same period.

2 Oil and gas data

More detailed information on the hydrocarbon industries of OPEC and non-OPEC countries, including oil and gas reserves, exploration and production, output and consumption of refined products, exports and imports. Most tables cover 1996-2000.



3 Transportation

A breakdown by size of the oil tanker and liquid gas carrier (LPG and LNG) fleets of OPEC Member Countries and the rest of the world, as well as freight rates for 1996-2000. Also includes data on all oil, gas and product pipelines in OPEC Member Countries.

4 Prices

Monthly average prices of the OPEC Reference Basket of crudes and its components for 1998-2000 and annual averages for 1991-2000, plus selected major crudes (OPEC and non-OPEC) for the same periods. Spot refined product prices and a breakdown of the composite barrel are also featured.

5 Major oil companies

Data on the operations of six oil majors: BP Amoco, ExxonMobil, TotalFinaElf, Royal Dutch/Shell, Chevron and Texaco. Tables show revenue, operating costs, taxation, net income and much more.

Packaged with the ASB is a 3.5-inch computer diskette (for Microsoft Windows only) containing all the data in the book and more. Many of the time series in the summary tables in Section 1 are extended back to 1960, the year of OPEC's founding, while much of the data in Sections 2-5 extends back to 1980. The application is simple to install and easy to manipulate and query. The data can also be exported to Microsoft Excel or other spreadsheets.

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OPEC Fund signs agreements for the encouragement and protection of investment with three countries

In July, the OPEC Fund for International Development signed agreements for the encouragement and protection of investment with three countries, the Republic of the Maldives, the Republic of Seychelles and the Republic of Senegal. The Fund also signed a co-financing and agency agreement with Proparco, a subsidiary of the Agence française de Développement, and extended a grant of $100,000 to support the work of the G-24. Details are given in the following press releases.

No 51/2001
Vienna, Austria, July 9, 2001

Fund and Maldives sign agreement to protect investment

An agreement for the encouragement and protection of investment has been signed between the OPEC Fund for International Development and the Republic of the Maldives. Drawn up within the framework of the Fund's Private Sector Facility, the convention was initialled by HE Fathulla Jameel, Minister of Foreign Affairs of the Republic of the Maldives, and by HE Dr Y Seyyid Abdulai, Director-General of the OPEC Fund.

The Fund's Private Sector Facility is a financing window, endowed with its own resources, through which the Fund channels support directly to the private sector in developing countries. The objectives of the Facility are to promote economic development by encouraging the growth of productive private enterprise and supporting the development of local capital markets. Under the Facility, loans are made to financial institutions for on-lending to small, medium and micro-enterprises, as well as directly to specific projects. Equity participation in private enterprises is also undertaken, either directly or through country or regional investment funds. As a pre-condition to such investment, the Fund requires signature of a standard agreement with the country concerned for the encouragement and protection of investment. Recognized as a gesture of trust and confidence, the agreement accords the OPEC Fund the same privileges as those normally given to international development institutions in which the country holds membership.

The Republic of the Maldives is an archipelago consisting of around 1,200 coral islands in the Indian Ocean and is inhabited by a population of approximately 270,000 people. The country has achieved considerable economic growth over the past two decades through the development of its tourism and fisheries sectors, favorable external conditions, large inflows of external aid and good economic management. As a result, the Maldives has experienced a steady GDP growth of nine per cent since the late 1970s, and average GNP per capita was estimated at $1,200 in 1997. The tourism sector has developed through the initiative of the private sector and has achieved significant growth in the past decade, accounting for over 19 per cent of GDP in 1997, one-fifth of the total employment and more than half of total foreign exchange earnings. Over the past two decades, the Maldives' fishing industry has developed into a modern industry able to compete effectively in world markets, with export volume and earnings rising by 19 per cent and 58 per cent respectively during 1996-97 due to the partial opening up of the export activity to the private sector.

No 52/2001
Vienna, Austria, July 10, 2001

Fund and Proparco sign co-financing and agency agreement

A co-financing and agency agreement was signed between the OPEC Fund for In-

OPEC Fund for International Development, Parkring 8, PO Box 995, 1011 Vienna, Austria. Tel: +43 1 515640; fax: +43 1 513 9238; tx: 1-31734 fund a; cable: opecfund; e-mail: info@opecfund.org; Web site: http://www.opecfund.org.

ternational Development and Proparco, the Société de Promotion et de Participation pour la Coopération Économique of France. The agreement was initialed by Pierre Buchaillard, Vice-Chairman of Proparco and by HE Dr Y Seyyid Abdulai, Director-General of the OPEC Fund.

Proparco was founded in 1977 as a subsidiary of Agence française de Développement (AfD), a public institution and the main financial instrument for deployment of French project aid. AfD operates in over 80 developing countries and in overseas French territories and has a network of 45 local offices and agencies worldwide. Originally a venture capital institution, Proparco was converted in 1990 into a finance company with limited liability. Its aim is to promote and finance the development of private sector enterprises; it does so through equity and quasi-equity investments, medium- and long-term loans, and guarantees; it also offers financial advisory services. Proparco operates in over 60 countries and territories and has six regional offices in Africa. In other geographical areas, AfD acts on behalf of Proparco. Proparco has so far invested in some 400 projects, primarily in Africa but also in the Caribbean and South-east Asia.

The OPEC Fund and Proparco already have a general co-operation agreement in place, signed on July 6, 2000. Both institutions pursue similar objectives and have a common interest in supporting development in the private sector. Through its Private Sector Facility, the OPEC Fund aims at promoting economic development by encouraging the growth of productive private enterprise in developing countries. As a mode of operation within the private sector, the OPEC Fund favors engaging in partnerships with other relevant development institutions.

Under the co-financing and agency agreement, the OPEC Fund and Proparco will finance projects in selected countries. Loans will be made available to financial intermediaries, such as banks and leasing companies, as well as for the direct financing of projects. Both institutions, through participation in each other's lending and other investment activities, will enhance their operational capacity and benefit their respective countries of operation.

No 53/2001
Vienna, Austria, July 24, 2001

Fund and Seychelles sign investment protection agreement

An agreement for the encouragement and protection of investment has been signed between the OPEC Fund for International Development and the Republic of Seychelles. Drawn up within the framework of the Fund's Private Sector Facility, the convention was initialled by Francis Chang Leng, Principal Secretary for the Ministry of Finance of the Republic of Seychelles, and by HE Dr Y Seyyid Abdulai, Director-General of the OPEC Fund.

The Fund's Private Sector Facility is a financing window, endowed with its own resources, through which the Fund channels support directly to the private sector in developing countries. The objectives of the Facility are to promote economic development by encouraging the growth of productive private enterprise and supporting the development of local capital markets.

Under the Facility, loans are made to financial institutions for on-lending to small, medium and micro-enterprises, as well as directly to specific projects. Equity participation in private enterprises is also undertaken, either directly or through country or regional investment funds. As a pre-condition to such investment, the Fund requires signature of a standard agreement with the country concerned for the encouragement and protection of investment. Recognized as a gesture of trust and confidence, the agreement accords the OPEC Fund the same privileges as those normally given to international development institutions in which the country holds membership.

Seychelles, an archipelago consisting of some 115 islands in the western Indian Ocean, is inhabited by a population of approximately 80,000 people. Since achieving independence in 1976, per capita output has increased roughly by sevenfold. The country's main economic activities are tourism, which employs about 30 per cent of the labour force and accounts for more than 70 per cent of export earnings, and fishing. Since the early 1990s, the government has implemented a series of economic reforms comprising a mix of reduced controls on the economy and increased economic liberalization, both areas making considerable progress, as reflected by a GNP per capita of $6,540 and GDP average annual growth of 3.2 per cent in 1999. These achievements have helped foster a hospitable enabling environment for the promotion of enterprises in the country's private sector, a situation regarded by government as critical to the rapid development of the country.

No 54/2001
Vienna, Austria, July 27, 2001

OPEC Fund extends $100,000 grant to support work of G-24

The OPEC Fund for International Development has approved a replenishment grant of $100,000 in support of the research programme of the Intergovernmental Group of Twenty-Four on International Monetary Affairs (G-24).

This grant will help finance the G-24 Workshop on Financing for Development which is scheduled to take place in New York this coming autumn.

Established in 1971, the G-24 meets twice a year before the spring and autumn sessions of the Interim and Development Committees of the International Monetary Fund and World Bank.

It prepares positions on various issues and aspects of development, and makes recommendations which are especially significant as far as the two committees are concerned. These committees are required to advise and report to the Boards of Governors of the World Bank and the IMF and to make suggestions for consideration by those concerned regarding the implementation of their conclusions.

The New York Workshop will be a preparatory for the United Nations International Conference on Financing for Development to be held in Mexico in 2002, and will bring together international experts, high-level representatives of G-24 member governments, Group of

77 heads of missions, and Executive Directors and Alternates at the Boards of the IMF and the World Bank.

In all, around 40 participants are expected to attend, in addition to authors and guest speakers. Some of the primary themes to be discussed include: resource transfers to developing countries; proposals for an orderly solution to the external debt programme; and global economic governance.

An initial grant (also of $100,000) was extended by the Fund to the Group 12 months ago, helping to finance a workshop hosted by the Fund in September 2000.

This latest contribution will be used specifically towards defraying the costs of the seven research papers to be presented at the upcoming workshop, and for a workshop co-ordinator.

The OPEC Fund enjoys observer status in the Development Committee of the World Bank, and also attends G-24 meetings, both at the Deputy and Ministerial levels.

No 55/2001
Vienna, Austria, July 30, 2001

OPEC Fund and Senegal sign agreement to protect investment

An agreement for the encouragement and protection of investment has been signed between the OPEC Fund for International Development and the Republic of Senegal. Drawn up within the framework of the Fund's Private Sector Facility, the convention was initialled by HE Abdoulaye Diop, Minister of Economy and Finance of the Republic of Senegal, and by HE Dr Y Seyyid Abdulai, Director-General of the OPEC Fund.

The Fund's Private Sector Facility is a financing window, endowed with its own resources, through which the Fund channels support directly to the private sector in developing countries. The objectives of the Facility are to promote economic development by encouraging the growth of productive private enterprise and supporting the development of local capital markets.

Under the Facility, loans are made to financial institutions for on-lending to small, medium and micro-enterprises, as well as directly to specific projects. Equity participation in private enterprises is also undertaken, either directly or through country or regional investment funds. As a pre-condition to such investment, the Fund requires signature of a standard agreement with the country concerned for the encouragement and protection of investment. Recognized as a gesture of trust and confidence, the agreement accords the OPEC Fund the same privileges as those normally given to international development institutions in which the country holds membership.

Senegal is a country of more than nine million people with a per capita GNP of $510. Recent economic development has been promising, with inflation remaining below 3 per cent since 1996 and real GDP growth increasing to 5.7 per cent in 1998.

The country has made considerable progress in sectoral and structural issues due to key reforms taken in the trade and energy sectors. Private sector development has been fostered in many ways, including the establishment of an improved regulatory environment and liberalization of the labour market and prices. These and other measures have greatly enhanced openness and competitiveness, and have helped cultivate a hospitable enabling environment for the promotion of enterprises in the country's private sector, a situation regarded by government as critical to the rapid development of the country.

July

Secretary General's diary

The *WinConference '01* was organized by Credit Suisse and was held in Interlaken Switzerland, July 5–6, 2001.

The *Resumed 6th Session of the Conference of the Parties (COP6),* the *14th Session of the Subsidiary Body for Scientific Advice (SBSTA),* and the *14th Session of the Subsidiary Body for Implementation (SBI)* were organized by the UNFCCC, and took place in Bonn, Germany, July 16–27, 2001.

Secretariat missions

The *Middle East Seminar* was organized by the Committee for Energy Policy Promotion, Japan, and took place in Tokyo, Japan, July 3–4, 2001.

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How to pay:

Invoice me ❐ Credit card ❐ (American Express, Visa, Eurocard/MasterCard and Diners Club)

Credit card company: Credit card no: Expiry date:

Holder: Signature:

Please mail this form to:
PR & Information Department
OPEC Secretariat
Obere Donaustrasse 93, A-1020 Vienna, Austria

or telefax to:
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+43 1 214 98 27

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