

**Saudi Arabia Oil and Gas Investment
Outlook and Strategies**

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Ladies and Gentlemen,

I would like to thank Dr. Edmund Daukoru, President of the OPEC Conference and Secretary General for his invitation to participate in this Seminar. Over the years, this seminar has proven to be an invaluable venue, bringing together representatives from governments, industry, the media and others to discuss issues of importance to world energy and the global economy. I would like to share with you today Saudi Arabia's oil and gas investment strategies in the context of oil market evolution and outlook as well as our economic development strategy.

The production, consumption and trade in oil and gas as well as their vital role in the economies of both producing and consuming regions, have shaped global economic and energy relations for most of the twentieth century, and expected to continue to play important role for many more years to come.

The past three decades, however, have witnessed structural changes in both world oil and gas supply and demand patterns which have altered the face of the world energy market in important ways, something we need to keep in mind for today's discussions. Let me elaborate.

Oil demand in the OECD, which accounted for 70 per cent of global demand in the 70s, has grown by average of 0.7 per cent annually since then, while demand from emerging economies in Asia and Latin America grew by an average of 4 per cent. This resulted in an increase in their share in global demand from 16 per cent in 1975 to 36 per cent today.

During the same period, demand for natural gas grew by an average of 1.7 per cent annually in the OECD and 6.7 per cent annually in the developing countries, thus altering the relative share of the developing countries in world oil demand from 8 per cent in 1975 to 26 per cent today. The last thirty years also witnessed a change in the relative shares of the key consuming sectors of oil and gas, as oil commanded the highest share in the transportation sector fuel demand while the gas increased its share in the power sector fuel requirements.

Considering its availability, versatility, competitiveness, proven end-use technologies and available infrastructure, most world energy outlooks forecast oil to retain its leading position in the world's primary energy mix at 37 per cent by 2025. Meanwhile, gas will increase its share to 30 per cent. Both fuels combined are expected to account for two thirds of global energy consumption and more than 85 per cent of global energy trade by 2025.

Over the past three decades, the developing countries of Asia, the Middle East and Latin America have accounted for half of the increase in global oil demand, and are expected to account for 75 per cent of the 30 million barrels per day projected increase in world oil demand by 2025. The transportation sector is forecast to account for 60 per cent of oil use due to the increase in vehicle ownership worldwide, which will grow from 135 vehicles per 1,000 inhabitants today to 190 vehicles by 2025.

Considering global economic uncertainties, the future shape of the world economy will have a tremendous impact on energy demand in general and on hydrocarbons demand in particular. While the world does need continued improvements in energy efficiency, some government

policies which artificially curtail demand and create demand uncertainties irrespective of market signals will have economic ramifications that could jeopardize global energy future.

Turning to the supply side, favorable oil prices and improving technology during the past three decades have resulted in production increases from different regions outside OPEC of around 20 million barrels per day. Today there are more than 60 oil and gas producing countries worldwide, and more than forty of these are net exporters.

Contrary to the concerns of resource pessimism or the "peak oil" advocates, when it comes to supply the above ground factors are more relevant than those underground. Out of an estimated 2.3 trillion barrels of recoverable conventional oil reserves, the world has produced only one trillion barrels. Advancements in exploration and production technologies over the past 30 years have contributed considerably to an increase in global oil and gas resources.

Proven oil reserves were estimated at 630 billion barrels in 1975, but almost doubled by 2005 despite the cumulative production of around 750 billion barrels over the same period. On the other hand, gas reserves, estimated at 80 trillion cubic meters (TCM) in 1975, today stand at 180 trillion cubic meters, even after an accumulated production of 60 trillion cubic meters during that period.

Considering the large worldwide hydrocarbon resource base, both conventional and non-conventional oil production, as well as gas production, will increase in many regions such as Russia, the Caspian, Canada, West Africa, Latin America, the Gulf of Mexico and the Middle East. Also, the changes in both supply and demand patterns will result in a significant expansion in global trade in energy with shifting patterns.

Forecasts suggest that regardless of energy security concerns and various policy measures, OECD oil imports will grow from 55 per cent today to 66 per cent of consumption by 2025. Even more dramatically, China's oil imports are forecast to increase from 35 per cent to 75 per cent over the same period.

The role of the Middle East is central to satisfying this anticipated growth in demand, production and trade. The region is forecast to increase its production share from 30 per cent today to 40 per cent of the projected world oil production in 2025. This will contribute to an increase in its share to half of the projected global oil trade of 70 million barrels per day in 2025. Similarly, the region's share in the global natural gas trade is projected to double by then, reaching 30 per cent of the total.

This supply outlook will certainly be impacted by the various uncertainties involving energy policies and the development of alternative sources of energy and technology, including efforts to move toward a hydrogen economy, subsidized renewables such as bio-fuels, and the increased market penetration of hybrids cars. Geopolitical issues and bias regarding energy imports from the Middle East in some countries add to this climate of uncertainty.

Without a doubt, the world still needs contributions from a wide range of energy sources and regions to meet the growing energy demand of a rising world population in the future. However, impractical energy policies, unrealistic time frames to bring some alternatives on stream, or the inefficiencies that come with inputting more energy to produce some of these alternatives due to energy security concerns do nothing to secure the world's energy future.

The last aspect of the evolving global energy scene involves changes in our industry's structure, which are shaping the business environment in important ways. The emergence of national oil companies in particular has introduced a new dimension in the oil and gas investment and supply pictures. Today, companies such as Saudi Aramco, Brazil's Petrobras, Venezuela's PDVSA, China's Sinopec and CNPC, Russia's Gazprom and Lukoil and Mexico's Pemex — to name just a few — play important roles in the global energy market. The NOCs currently hold around 2.3 trillion barrels of oil equivalent in oil and gas reserves, constituting some 65 per cent of the world total, and are producing around 57 and 38 per cent of world oil and gas production respectively.

On the other hand, the international oil companies, or IOCs, have managed to grow in size and expand their activities worldwide through mergers and acquisitions, and have made the most of the improved business environment. Of course, the robust outlook for oil and gas demand in the coming years will provide growth opportunities and pose business challenges for both NOCs and IOCs.

Ladies and Gentlemen,

The underlying uncertainties of the demand and supply outlooks necessitate prudence, meaning producers and the industry at large must entertain alternative business scenarios when they make long term decisions regarding production and refining capacity expansions and upgrades-programs that involve investments of massive proportions.

While the world's attention today is focused primarily on crude oil production capacity, meeting global demand also requires timely investment along the entire oil and gas value chains, from production to transportation to refining and processing, as well as their related infrastructures.

To reliably meet growing energy demand, the industry must deal with a stretched refining system, and match refining capacity to the anticipated future slate of crude oil that is becoming heavier and sourer, as well as attend to the infrastructure bottlenecks in pipelines, terminals, shipping and critical sea channels.

Considering the long lead times required to plan and complete the development of oil and gas fields and the construction of associated facilities, including infrastructure, timely investments by both IOCs and NOCs are required to deliver crude oil, refined products and gas supplies when and where they are needed.

On the upstream side, the combination of the projected supply and demand changes and their underlying uncertainties will fall most heavily upon the world's residual producer, OPEC. In the case of an upside scenario, OPEC is expected to be ready to furnish any supply shortfalls and meet expanding demand. On the other hand, in case of a downside scenario, OPEC is left to bear the brunt of harsh market realities.

It is estimated that a difference of just one million barrels per day of projected production from OPEC entails an over- or under-investment of \$8 billion by 2010 and about \$15 billion by 2025. It is within this range of uncertainty that our countries must plan and execute their production capacities.

Based on the outlook of growing demand for their oil and gas, by 2011 the countries of the Middle East will invest some \$94 billion in their oil and gas upstream sectors, more than half of which will go to expand oil production capacity. This is in addition to more than \$240 billion of investment in the mid and downstream oil and gas chains and petrochemicals. These investments are being made at a time of growing needs in other sectors of the region's economies. The materialization of the projected demand will make such investment rewarding not only to the region but also to the world economy.

Needless to say, once capacity is developed it must be sustained, which entails offsetting natural decline. To achieve this objective, reserves must be continually added and further investments made to maintain capacity. Producers must also keep in mind the utilization rate of reserves, which involves the complex balancing of technical factors, market demands, and the producing countries' own long-term interests.

In Saudi Arabia, we face similar challenges in our upstream and downstream oil and gas investment plans. Over the next five years, our total oil and gas upstream and downstream investment programs will total some \$70 billion, and are based on certain market outlook and national priorities.

The key considerations guiding our capacity expansion plans include the assessment of market demand for our oil, our national development objectives, the profitability of various available oil development opportunities, and oil field and reservoir factors.

A key tenet of our capacity development and utilization strategy is to ensure balanced markets at all times, which requires the maintenance of sufficient excess capacity to appropriately respond to unforeseen supply disruptions and to ease potential bottlenecks. This capacity cushion has been instrumental in keeping the market well supplied and balanced through a range of demand surges and supply interruptions experienced over the past many decades.

It was OPEC's — and mainly Saudi Arabia's — readily available capacity which eased the supply shortfalls during the Iranian revolution in 1979, the Iran-Iraq war in the 1980s, Iraq's invasion of Kuwait in 1990, FSU's production decline in the early nineties, the Venezuelan strikes of 2002, the Iraq war in 2003, intermittent Nigerian civil strife, and the Gulf of Mexico hurricanes in 2005 to name just a few such interruptions.

Based on our long experience with global markets and our policy of keeping adequate excess capacity in the range of 1.5–2 million barrels per day at all times, we have embarked on a program of massive investments estimated at around \$18 billion, that will expand crude oil production capacity to reach 12.5 million b/d by 2009.

These plans entail bringing on stream increments totaling 2.35 million barrels per day from seven fields. Around 1.5 million barrels per day will be net additions to capacity, 1.1 million bpd of which will be of Arab Light quality while the rest will consist of Arab Extra and Arab Super Light crudes. The rest of the additions are intended to augment existing capacities including the offsetting of natural decline. In addition to these investments, an estimated \$2 billion is spent annually to maintain capacity and offset natural decline.

The first increment of this program from the Haradh oil field with a 300,000 barrels per day additional capacity was completed earlier this year, while other increments in the Abu Hadriya, Fadhili, Khursaniyah, Shaybah, Nuayyim and Khurais fields are to be completed successively by 2009. Manifa is the latest world-class addition to the crude program and will total about 900,000 barrels per day of Arabian Heavy capacity when it comes on stream in 2011. Since we started this program the drilling rig count doubled from 55 in 2004 to more than 100 today and will reach 130 by May next year.

We are confident that our national oil company will be able to execute the additional capacity programs efficiently and on schedule. Saudi Aramco has demonstrated its special competency in executing mega projects in the Shaybah, Qatif and Abu-Saafah oil increments, and in the construction of the Hawiyah and Haradh gas plants.

While we are confident of our assessment of the market and our ability to deliver additional crude supplies — the major factors underpinning our massive investments — we continue to monitor market developments and their impact on our plans. Previous market episodes on both the up and down sides as well as our own experience have provided us with invaluable lessons on vigilance, contingency planning and preparedness.

Ladies and Gentlemen,

Although the lion's share of attention is focused on our upstream oil capacity expansion, two other aspects of our investments warrant mentioning here: our downstream capacity expansion both in-Kingdom and in jointly owned refineries abroad, and our gas exploration and production program. Recognizing that capacity is needed throughout the entire oil value chain to keep crude and products markets balanced at all times, we are doing our part in the drive to increase and upgrade refining and related capacities worldwide.

To this end, we have entered into two grassroots refinery joint ventures, one each on Saudi Arabia's Red Sea and Gulf Coasts, totaling 800,000 barrels per day of capacity, in addition to some 200,000 barrels per day of capacity additions and upgrades in our existing in-Kingdom refineries. These, projects along with planned investments with our partners to expand and upgrade our joint venture refineries in Asia and the United States will add around two million barrels per day to global refining capacity by 2012 — constituting around one third of planned worldwide capacity additions.

Further downstream, we are integrating world-scale petrochemicals manufacturing with our key refineries. The Rabigh joint venture being developed in partnership with Sumitomo Chemical of Japan is making rapid progress. Another similar project is being considered for the Ras Tanura Refinery on the Kingdom's East Coast, which would be the largest of its kind in the world.

The benefits of such projects are multifaceted, helping to add more value to our refined product streams, assist in further expanding the petrochemical and chemical industries that are important enablers of other industrial expansion, create jobs, and enhance refineries' profitability.

The gas program also features prominently in our hydrocarbon investment program. Saudi Aramco, which has doubled the Kingdom's gas reserves over the past decade, has also

doubled gas production and processing capacities in the last five years. The recent gas offerings to IOCs in the Kingdom are also a testament to our drive to attract foreign direct investment in suitable segments of the industry, leading to continued development of our gas resources for domestic use as fuel and feedstock.

These investments in oil and gas, both upstream and downstream, contribute to market stability and predictability. This also reassures the world economy especially the economies of the developing countries of continued flow of energy resources to fuel growth and progress. And while they increase the value added and returns to the Saudi economy, they also provide attractive opportunities to the local and international oil and energy industries in the engineering, design, construction and services arenas. I would therefore like to encourage businesses everywhere to seize these opportunities and build mutually beneficial, long-term alliances and relationships with Saudi enterprises.

Ladies and Gentlemen,

Such opportunities and undertakings pose numerous political, economic, technological and managerial challenges. We recognize that the future of these investments and their returns depend on a healthy global economy, especially in the emerging nations that will account for the largest share of incremental growth in energy demand. Conversely, such investments are also necessary for the health of the world economy, which relies so heavily on a stable, reliable supply of hydrocarbons.

The appreciation of this dynamic of interdependence guides the kingdom's policies, and should also shape those of other energy stakeholders, whether consuming governments, international lending institutions, the industry, or international energy organizations such as the IEA, IEF and OPEC. Recognizing that greater cooperation and coordination are indispensable elements of our energy future is the first step in making that vision of shared progress and prosperity a reality.

Thank you for listening.