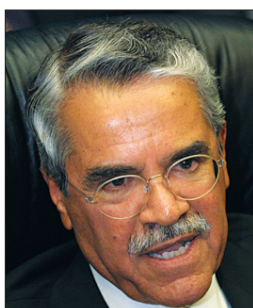


Energy security and sustainability

INTERVIEW WITH HE ENG DR ALI BIN IBRAHIM AL-NAIMI

MINISTER OF PETROLEUM AND NATURAL RESOURCES



ALI BIN IBRAHIM AL-NAIMI

has a bachelor degree in geology from both Le High University and a masters from Stanford University in the U.S. He joined Aramco in 1947, became a board director in 1980 and was appointed president in 1983. He assumed his current position as minister of petroleum and mineral resources in 1995.

This year has witnessed major disruptions to oil supplies – how well did the corrective nature of the international global oil market perform?

I believe the market performed well. For example Additional supplies from foreign sources were drawn to the U.S. in the wake of Hurricanes Katrina and Rita, replacing lost domestic production and thereby softening the blow to consumers.

We also saw how changing mandated product specifications can challenge the industry's ability to deliver sufficient products to consumers. This occurs at a critical time when refiners are facing the added burden of substituting ethanol for MTBE.

Political tensions, tight petroleum product markets, and talk of the world running out of oil are fostering an environment of fear and uncertainty in oil markets and among consumers. The consequences are clear to us all – prices for crude oil, heating oil and gasoline have risen to record levels. This is not a situation in which anyone can take comfort.

What are the prospects for achieving genuine sustainable energy security?

The global community faces tough choices as it struggles with how to achieve energy security. I believe we must act decisively because the current path poses a real threat of a continuing boom and bust cycle that robs us of the stability and predictability which promotes sound economic growth. At the same time, we must heed the lessons learned during the previous eras of energy uncertainty and avoid repeating the costly mistakes of the past.

Energy security tends to be defined most frequently in terms of price and availability. Consumers feel secure when prices are low and supply is plentiful. In such periods, it is of little concern to consumers from where their energy is coming. On the other hand, producers feel secure when prices are high and demand is predictable. It follows that when prices rise or supply tightens consumers feel less secure.

Alternatively, when prices decline or demand falls producers feel growing insecurity. However, I believe that the energy security debate has been hampered by two tendencies. The first tendency is for some to view energy security as a zero sum game; that is to say, gains by consumers can only come at the expense of producers. Conversely, when producers gain, consumers lose. The

second tendency is to define energy security in terms of price extremes; i.e., consumers are more secure when energy is very cheap and producers are more secure when energy is expensive. If energy security is defined in these terms, consensus is not possible.

Why is the concept of sustainability so critical to long term energy security?

Experience shows us that energy security is transitory when the underlying conditions necessary for long-term stability are not present. For example, from the mid 1980s until 2000, prices remained low and energy security was not a major concern for consumers. The primary basis for this security was the existence of large quantities of spare capacity in the supply chain. But this period of low prices created the conditions for its undoing. Low prices discouraged investment in capacity and accelerated demand growth. This combination eventually removed the spare capacity on which the sense of security was built. In doing so, the stage was set for a significant price increase and a growing sense of energy insecurity among consumers.

Now producers who associate high prices with energy security have also experienced the illusion of energy security. In the run-up of prices in the late 1970s and early 1980s, many producers thought that they had achieved energy security. Demand was strong. Prices were high, and supply was tight – very much like the conditions we are experiencing today. Yet their sense of security did not last long, as high prices inevitably undermined demand while stimulating capacity expansion. In both cases, energy security was merely a mirage.

Energy security cannot be maintained when prices are at extremes – too low or too high. Truly sustainable energy security for consumers and producers requires three conditions – price stability, supply and demand reliability, and affordability. These are the three pillars of sustainable energy security. Affordability applies to both consumers and producers. If producers are forced to sell their energy resources at low price, they eventually cannot afford to make the capital investments required to maximise long-term capacity. On the other hand, producers undermine their own security when their resources are not affordable to consumers. The foundation of

sustainable energy security is a price low enough to avoid harming consumers, yet high enough to assure adequate return on investment for producers.

To what extent is market stability dependent on building a global consensus?

I believe our energy problems are global in scope and that the stability and predictability we desire can only be achieved when countries work together. I say this because oil markets are part of a globalised system. The negative consequences of withdrawing from the global economy far outweigh any perceived benefits. Long-term energy security cannot be achieved at the expense of others; it must be a win-win proposition. This means that energy prices must be higher than some consumers would like and lower than what some producers would like.

What is your response to those who argue for a policy of energy self-reliance?

The idea that the energy security is best achieved in co-operation with others is not unfortunately universally accepted. As is common in periods of market turmoil, like we see today, there are some who argue for self-reliance or going it alone.

While self-reliance is appealing, the efficacy of such an approach for achieving long-term energy security is an illusion built on the myth that security can be achieved through protectionist measures aimed at blocking certain types of imports or goods and investments from certain regions of the world. Such measures are a retreat from the gains afforded by globalisation. Those countries backsliding into protectionism believe that they are better off by withdrawing. The reality is that the world is becoming more interdependent, and prosperity today and in the future is tied to full participation in the global trading system. Not only is a country worse off when it builds walls around itself and slips into protectionism, but the global system as a whole suffers.

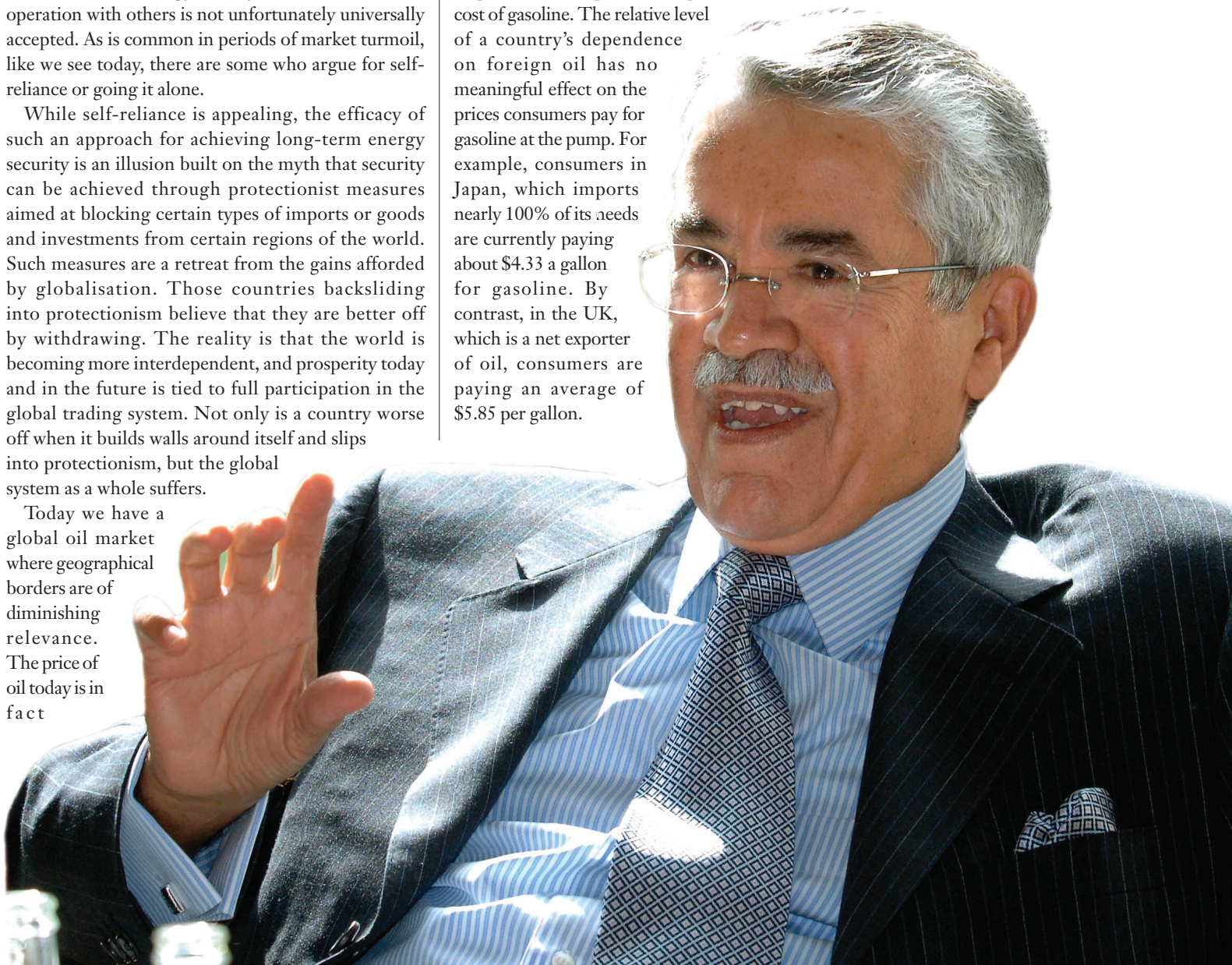
Today we have a global oil market where geographical borders are of diminishing relevance. The price of oil today is in fact

a world price which is determined transparently in the marketplace. Oil prices are established through the interaction of buyers and sellers in thousands of individual transactions occurring daily from Hong Kong to Houston. Oil has achieved the status of a true commodity and a financial instrument, bought and sold in financial markets with the number of so-called "paper barrels" traded vastly outnumbering the volume of actual physical oil traded worldwide each day.

There is a popular conception that higher crude prices lead to higher pump prices. What is your response to this assertion?

There is no truth, whatsoever, in the popular belief that the dependence on foreign crude oil leads to higher prices for gasoline at the pump. The prices of both domestic and foreign crudes are set globally through the interaction of supply and demand. Any differences in the prices between domestic and foreign crudes are due to variations in quality, taxes and location. Yes, crude oil prices are an important component in the cost of gasoline. The relative level of a country's dependence on foreign oil has no meaningful effect on the prices consumers pay for gasoline at the pump. For example, consumers in Japan, which imports nearly 100% of its needs are currently paying about \$4.33 a gallon for gasoline. By contrast, in the UK, which is a net exporter of oil, consumers are paying an average of \$5.85 per gallon.

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Is there a long-term solution to enhancing and maintaining energy security?

Let me begin by saying that I take strong exception to the notion that our current difficulties are a harbinger of things to come. The current problems that are resulting in high prices are not insurmountable. The do not warrant the rejection of oil.

We should not lose sight of the fact that oil is merely a means to an end – it is, simply put, an efficient energy carrier. Oil provides value and has brought prosperity to many. It can facilitate the process of bringing prosperity to even more of the world's population.

We use oil because it provides the lifestyle we desire. It remains the most efficient and cost-effective fuel for transportation and will until technology dictates otherwise. Forcing consumers to prematurely switch away from oil to less efficient alternatives entails economic costs that must ultimately be borne by the consumer. This is not the way to foster sustainable energy security.

Our current difficulties can be overcome. However, while sustainable energy security is achievable, it is not guaranteed. We must produce and consume energy in the most efficient manner possible so as not to waste valuable natural resources – oil included. We must also work to remove constraints which limit our ability to bring energy supplies to consumers.

What are the long-term challenges involved in establishing long-term energy security?

Fostering long-term energy security will require producers and consumers to confront four key challenges: improving data, removing impediments to deliverability, protection the physical security of supply system, and maintaining the flexibility necessary for overcoming unanticipated disruptions.

Challenge number one – while much needs to be done to improve oil market data, there is a particularly pressing need for predictable energy demand data. The lack of reliable information on demand markets makes it very difficult to assess the risks and rewards of investing billions of dollars to increase capacity. When faced with these decisions, producers must evaluate both market-driven forces as well as unpredictable government policies which can either inflate or reduce future demand for energy.

Challenge number two – the need to remove constraints on deliverability. Resource availability is not a threat to sustainable global energy security. There is plenty of oil left to be produced and technology will help us recover an ever greater percentage of the oil in place. While availability is not a concern, it is clear that the industry must confront serious bottlenecks and constraints in our ability to deliver products to end consumers.

We in Saudi Arabia are committed to resolving this deliverability challenge. We are undertaking a massive investment program to increase our production capacity to 13.5 million barrels per day by 2009 with the potential for more later if market conditions warrant.

In the downstream, the world faces a problem that is currently very critical to the oil market – limited refining capacity and the mismatch between the available crude slates and refinery capabilities. To help address the limitations of existing refining capacity to process medium and heavy crudes, Saudi Arabia is undertaking a two-pronged strategy. First, we are developing reserves of lighter crudes in our current production capacity expansion program. Second, we are expanding our capacity to refine heavier crudes in domestic refineries and international refining joint ventures.

Challenge number three – the pressing need to protect our energy infrastructure. Terrorism is a threat to us all. In their efforts to strike at us, the terrorists have begun to focus on disrupting our energy infrastructure. In Saudi Arabia, we have been aware of the potential threat to energy facilities for some time and we have invested heavily in both technology and manpower to protect against such acts of violence.

As recent developments over the past year have demonstrated, terrorism is not the only threat to the security of our energy infrastructure. Natural disasters, like hurricanes and earthquakes have the potential to seriously disrupt our energy supply system for extended periods of time.

Challenge number four – maintaining sufficient flexibility in our energy system to meet unexpected developments that can adversely affect markets. We in Saudi Arabia have long recognised the value of spare capacity so enhancing the security of the global energy system. That is why it has been and will continue to be our policy to maintain 1.5 to 2 million barrels per day of spare crude oil production capacity. Over the years, the existence of spare production capacity in Saudi Arabia and in other countries has acted as an insurance policy for consumers, helping to lessen the negative impact on prices of wars, strikes, and natural disasters.

Is there a sufficient cushion of spare capacity?

The world's cushion of spare capacity has unfortunately been eroded over the past few years. Experts attribute this to surging global demand and insufficient investment in production capacity during the low price environment of the 1980s and 1990s.

Producers are not the only ones that can take steps to improve the flexibility of our petroleum system to deal with unexpected disruptions. Consuming countries can

also play a role as many do through their commitment to maintain strategic reserves of crude oil or refined petroleum products.

Our ability to restore flexibility to the system and improve deliverability is greatly enhanced in an environment that offers sufficient incentives for the industry to invest in new capacity. While this may not be a concern in the current price environment, it was the case for many years, and may again be an issue in the future.

What are the Kingdom's current energy initiatives?

The kingdom is undertaking a number of major ventures in natural gas exploration, petroleum refining, petrochemicals, power generation, water desalination, mining, and manufacturing which will create investment and employment opportunities for Saudi Arabia and its citizens. Successful completion of this massive undertaking will require technological prowess, resourcefulness and a high standard of excellence.

The International Energy Forum has become the catalyst for the producer-consumer dialogue. What role is the Kingdom playing in this initiative?

Fifteen years ago, the International Energy Forum (IEF) began its work to change the dynamics between producers and consumers of energy, with a focus on greater co-operation. Saudi Arabia's guiding principles of moderation and balance have made it one of the most vocal advocates of continuous dialogue between producers and consumers. In order to promote the goal of reliable, affordable energy to support economic, political and social wellbeing in our interdependent world. Saudi Arabia is always ready to discuss issues of mutual interests

with our customers, partners and friends. We believe in transparent, direct and accurate communication, which has allowed the Kingdom to play an important role in maintaining the producer-consumer dialogue, in turn helping the world to avoid major energy crises, and to keep prices from rising to levels that harm economic prosperity.

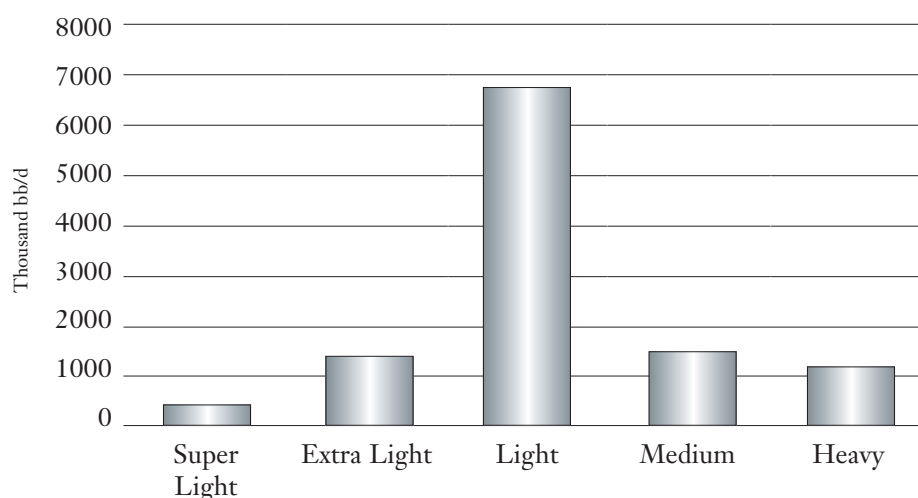
In addition to its duties as a facilitator of ongoing dialogue, the IEF Secretariat is spearheading a ground breaking effort to share vital energy information with the world – information that, for the most part, has not been made available previously. The Secretariat, together with six pioneering organisations (APEC, Eurostat, IEA, OLOADE, OPEC and UN), supervises the Joint Oil Data Initiative (JODI), which provides important energy-related data to the public. We believe that JODI is an important achievement that helps countries to better plan for the future. It will also contribute to the stabilising of the international market, as the lack of accurate, clear energy data is one of the most prominent barriers to oil market stability today. Nevertheless, the success of this initiative depends on the full co-operation and sustained efforts of all of its participants, a goal toward which we are steadily making progress.

The Kingdom of Saudi Arabia is committed to promoting dialogue as a gateway to co-operation and better understanding of the mutual interests and concerns of producers and consumers of energy. Continued dialogue, based on respect for all parties' points of view, is a prerequisite for progress and trust. **E**

Please see the special issue of World Petroleum published by FIRST to mark the 2006 IEF meeting in Qatar

IEF Secretariat is spearheading a ground breaking effort to share vital energy information with the world

Saudi Aramco Capacity by Grade, 2005*



*Source: International Oil Daily