

**AFFORDABLE ENERGY, ECONOMIC GROWTH**

**27 April 2004**

**Bob Ebel:** Thank you very much. My name is Bob Ebel and I chair the energy program at the Center for Strategic and International Studies Thank you very much for coming today and welcome to this conference on U.S.-Saudi Relations and Global Energy Security.

I have just a few housekeeping notes this morning to get things started. Please turn off your cell phones. Even though they don't work on this level, turn them off anyway. [Laughter]

Lunch will be one flight up in the Constitution Ballroom, so one escalator flight up.

We will have written questions for the first panel. If you want to submit a question raise your hand and you'll be provided with a card. The questions will come to me first. I'll make a first pass at the questions and then hand them on to Frank Verrastro who will be up here on the Podium

Finally and perhaps no less important, the restrooms are out and to the left, both men and women.

Thank you very much, ladies and gentlemen, and I look forward to your participation in this conference. We have a very interesting program laid out for you. It should end around 3:00 o'clock this afternoon. Thank you.

**Sheikh Abdulaziz Al-Quraishi:** Good morning, ladies and gentlemen. My name is Abdulaziz Al-Quraishi. I'm the Co-Chairman of the U.S.-Saudi Business Council. It gives me great pleasure to welcome you to this conference on U.S. -Saudi relations and global energy security.

We are delighted to be collaborating with the Center of Strategic and International Studies to host this event and we are looking forward to lively discussions.

We are fortunate to have key players today from both countries to give us their energy perspective. We have engineer Ali Al-Naimi, the Minister of Petroleum and Mineral Resources; we have Deputy U.S. Energy Secretary Kyle McSlarrow; and since the subject is energy security, former National Security Advisor General Brent Scowcroft. We also have Guy Caruso, Administrator of the Energy Information Administration. We have also MR.

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Abdallah Jum'ah, President and CEO of Saudi Aramco; and Rex Tillerson, President of ExxonMobil.

On the economic side we will hear from Dr. Ibrahim Al-Assaf, the Minister of Finance as well as the Chief Central Bankers of both countries, Sheikh Hamad Al-Sayari, Governor of Saudi Arabian Monetary Agency and of course Chairman Alan Greenspan who will give the keynote address at lunch. The international financial community will also be well represented by James Wolfensohn, President of The World Bank.

The subject of global energy security and within that the role of Saudi Arabia's oil reserves has generated a great deal of attention in recent weeks and months. Many doubts have been cast on the potential reserve of Saudi Arabia.

I would like to share a brief personal perspective and interesting statistics to provide some context for today's discussion.

When I was a graduate student back in the late 1959 at USC in California I was working on a paper on energy marketing and production. At that time U.S. reserves were estimated at about 31 billion barrels. Today, according to the Energy Information Administration, U.S. recoverable reserves are 22.5 billion barrels -- a decline of roughly 8.5 billion barrels since 1959.

Yet between '59 and today actual U.S. crude production has totaled more than 126 billion barrels. That's more than quadruple the level of proven reserves of 1959. This obviously reflects both major advances in technology and new discoveries. I think it provides an interesting perspective when we consider the current debate on Saudi recoverable reserves which stand today at 261 billion barrels and the future Saudi production potential.

As I mentioned, we at the U.S.-Saudi Arabian Business Council are pleased to have the opportunity to co-host this conference with CSIS. CSIS provides cutting edge analysis and policy leadership in many different areas, one of which is energy. The level of today's program is a large part of a reflection of the high regard in which CSIS is held here in Washington and in the global community.

I am pleased to turn the microphone over to the Senior Vice President and Director of Studies for CSIS, Dr. Patrick Cronin.

**Patrick Cronin:** Thank you very much. It's a great privilege for the Center for Strategic and International Studies to be co-sponsoring this timely conference with the U.S.-Saudi Arabian

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Business Council, and I really am looking forward to today's program.

I do want to just add a few words of welcome from CSIS. We have an outstanding energy program, as you just heard, and everybody in this room I believe knows Frank Verrastro and Bob Ebel. They've done a tremendous job.

Just a couple of months ago, in fact, CSIS hosted a conference on Saudi oil looking at the next 50 years. It was very much a technical conference, looking at some of the specialized issues such as the Kingdom's substantial oil reserves, the production policy, and the exemplary reservoir management practices in Saudi Arabia.

Today we're going to go beyond that. We're going to take the long view and look beyond at the energy security and other critical aspects of the U.S.-Saudi relationship because if there's anything that the last three years since September 11th have taught us here in Washington and at CSIS it is that one of the defining features of this century is clearly global interdependence, whether we're dealing with energy or the environment or the war on terrorism, and I think contrary to some of the recent press reports that we read, the relationship between the United States and Saudi Arabia is vital and it is strong. I'm very much here thinking about this conference today, about how we can add constructive insights and analytical insights to some of the issues that confront both of our countries.

U.S. and Saudi Arabian interests are inextricably linked. They demand the engagement of both sides if we are to strengthen this relationship in the coming years, and conferences like this one today who bring together senior representatives from our nations to discuss important issues do contribute immeasurably to that dialogue and to this alliance.

So at CSIS, again, let me welcome you and thank you very much for coming. It's really my deep honor now to turn the program over to a very dedicated American public servant and one of the most respected and trusted men in Washington, and a distinguished CSIS Trustee, General Brent Scowcroft. Thank you.

[Applause]

**Energy Security: New Perspectives**

**General Brent Scowcroft**  
*President, Forum for International Policy, CSIS Trustee*

Ali Al-Naimi  
*Minister of Petroleum & Mineral Resources, Saudi Arabia*

**Kyle McSlarrow**  
*Deputy Secretary, U.S. Department of Energy*

**General Brent Scowcroft:** Thank you very much. It's very nice to be here. I apologize for being late. I went to the wrong conference. [Laughter] Not unusual for me.

It's a great pleasure for me to add my welcome to you for today's conference and to introduce the first panel of the conference but let me begin with just a few general remarks.

As our sponsor and Patrick Cronin said, this could not be a more timely topic and I certainly commend both the U.S.-Saudi Business Council and CSIS for their foresight.

Earlier this year CSIS sponsored the first in a series of events dealing with the global oil supply. At one meeting senior Saudi Aramco officials I think persuasively made the case for the Kingdom's substantial reserve base, reservoir management practices, and their intention to be a reliable, long-term supplier. Today's meetings, as Patrick Cronin has said, are designed to go beyond these initial technical talks to the broader topic of energy security and the U.S.-Saudi relationship.

Events since September 11th have reinforced the view that a defining feature of the 21st Century is global interdependence, and nowhere is this more evident than in international oil markets. And nowhere in the market is it more evident than in relations between the Kingdom and the United States.

Interdependent relations always suffer from stress. The genius of diplomacy and the strength of long-term relations are the willingness and ability of the parties to manage and solve problems cooperatively as they arise.

Every relationship is imperfect by any number of measures but our mutual willingness to persevere over a long and somewhat difficult period suggests that both sides view the effort as critical and as strategically important. That effort begins with

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dialogue, and that dialogue is about to take place with our first panel on energy security and new perspectives.

No one is better able to begin the oil part of that dialogue than our first speaker, His Excellence Ali Al-Naimi, Saudi Arabia's Minister of Petroleum and Mineral Resources.

Minister Al-Naimi's career spans 50 years and is marked by unique accomplishments and distinguished service. He is the first Saudi to rise through the ranks of Aramco to become Company President and Chief Executive Officer. His career has progressed through the full range of the company's exploration and producing and staff operations beginning in the oil fields of the Eastern Province.

In 1995 he was appointed Minister, becoming the first Saudi to serve both as head of Aramco and then Minister. In addition he serves on the Supreme Petroleum Council, the Supreme Economic Council, and as Chairman of Aramco.

In his career he expanded the Saudi oil sector integrating it into the world oil market and making Aramco a truly world-class company. Most recently he oversaw the opening of the natural gas sector to foreign equity investment.

Please join me in welcoming Minister Al-Naimi.

[Applause]

**Minister Ali Al-Naimi:** Good morning, ladies and gentlemen. I am very happy to be back in Washington to participate in the second conference on the U.S.-Saudi Arabia economic and energy relationship. First, though, I would like to thank John Hamre, the President of the Center for Strategic and International Studies for organizing this timely conference and for his kind invitation to address this distinguished gathering.

Much has been said recently about the two issues of great importance to Saudi Arabia. The first is the U.S.-Saudi relationship; and the second is the future of oil. My remarks today will address both issues.

It would be incorrect to say that the history of U.S.-Saudi relations is only about oil. The relationship between our two countries is more complex and extensive than that and examples of cooperation in areas of mutual benefit are numerous. Nevertheless, there is no denying that the key pillar of our relationship is a shared commitment to ensuring the availability and security of adequate supplies of petroleum to meet world

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needs at fair prices that are conducive to overall economic growth.

We have witnessed during our lifetimes an unprecedented growth in the global economy and that has produced better lives for many of the world's peoples. There is no doubt in my mind that the economic progress of the 20th Century and now the 21st Century was made possible by the availability of plentiful supplies of reasonably priced energy and in particular, petroleum.

It's an impressive story, but not one that often grabs headlines. In fact it has been easy to become complacent about something as quietly consistent and reliable as the availability of petroleum and the products we derive from it.

One flips on the switch and the light comes on. When you need to go to the market to buy food you jump in your car, turn the key and off you go. When you need the plastics which are an integral part of modern life, they are there. Something as reliable and readily available as petroleum, however impressive, is often taken for granted, only drawing attention when something goes wrong.

Undeniably, we have faced numerous challenges over the past 30 years, but the one thing that has not wavered, that has worked with quiet consistency, efficiency and reliability is the supply of petroleum from Saudi Arabia to the United States and the rest of the world. Over the past 30 years through both the normal times and during times of upheaval, there have been few things more reliable than petroleum exports from Saudi Arabia.

Saudi Arabia is blessed with a magnificent endowment of petroleum resources unequalled anywhere. We believe that we have a responsibility to use this endowment in a constructive manner to bring stability to our markets, wherever we can. Our approach is one of moderation with the aim of ensuring security of supply for customers and stability of prices in the world oil market.

The reliability of supplies from Saudi Arabia is not just the product of good fortune, rather it's a direct result of Saudi Arabia's commitment to ensuring oil market stability. We work at it day in and day out, investing huge sums in the latest technologies, searching the world for the best talent, and then continuously training our workforce to meet the challenges of the new millennium.

It comes from our commitment to maintain spare production capacity at a significant cost to ourselves, to provide an

insurance policy for world oil markets. And it comes from our commitment to maintain relationships in all major markets, even when it is contrary to our short term economic interest to do so. We do all this so that we can maintain the reliability upon which the world has come to depend.

During times of turmoil when the world has needed more crude oil, Saudi Arabia has worked without fanfare to promote stability in world markets. One has to look no further back than early 2003 which was a particularly difficult time for world oil markets. A cold winter in the northern hemisphere, nuclear power problem in Japan, soaring natural gas prices in the U.S., political unrest in Venezuela, a strike in Nigeria and war in Iraq all threatened to destabilize world markets but Saudi Arabia was able to respond quickly with additional supplies to restore equilibrium to world markets by utilizing its spare production capacity.

We believe that stability in world oil markets depends on having adequate spare production capacity for maintaining balance in the market. Saudi Arabia is committed to providing a major portion of the world's spare capacity. We do it because we understand the importance of having a cushion for those times in the future when for whatever reason supplies from other sources are insufficient to meet demand. Our spare capacity has paid great dividends over the years by helping to minimize disruptions to the world economy.

Let me shift my focus, ladies and gentlemen, to the future. We have heard recently a number of analysts declare that the end of the age of oil is upon us. These nay-sayers maintain that the world is running out of oil. They say that we need to find alternatives quickly if we are to avoid a calamity of historic proportions. They are drawn to this conclusion by their pessimistic assumptions about remaining oil reserves and the degree to which this oil is recoverable.

Unlike these pessimists, I am quite optimistic about the future. Will there be challenges to overcome? My answer is yes. There are always challenges. Are we up to the task? Most certainly. We have faced many challenges before and by exercising our will, skills and intelligence, we overcame them. And we will continue to do so in the future.

Will it cost more in the future to find and produce oil? Probably yes. New discoveries are likely to be smaller, in more isolated locations and possibly more challenging to produce. Some of the fields would require the application of enhanced recovery technologies to maintain production levels. However, history shows that technical advances have steadily lowered costs over

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time and incidentally, have enabled producers to increase their proven reserves. Even if costs do arise we are confident that they will not be an insurmountable barrier to the development of future petroleum reserves.

Is technology the problem as some of the pessimists maintain? Certainly not. The proper application of technology will raise output while holding down costs.

Now let me elaborate a little further on these points. With regard to recent claims that the world is rapidly running out of oil, I would like to point out that this is not the first time we have heard warnings of impending scarcity. In fact dire Malthusian predictions about oil and other natural resources have been voiced now and again for at least the last 100 years. The most commonly held argument is that mankind faces the imminent exhaustion of the world's natural resources, including petroleum, due to growing population and the profligate lifestyles of wealthy nations.

How did past predictions of doom and gloom fare? Not very well. During this period when we were supposed to be running out of oil, world oil reserves continued to grow from about 550 billion barrels in 1970 to more than 1.2 trillion barrels today. What is all the more remarkable is that this increase occurred despite the fact that the world consumed over 800 billion barrels during this period.

In the case of Saudi Arabia our reserves were estimated to be about 88 billion barrels in 1970. Today we conservatively estimate them at 261 billion barrels, despite the intervening 35 years of production. Saudi Aramco President and CEO Abdallah Jum'ah will provide greater details on Saudi Arabia reserves and future production potential in the conference's second session.

Some skeptics express this belief. Of the nearly three-fold increase in our reserve number over the past 30 years there is really nothing magical about these numbers. Our years of experience gained from producing oil fields along with advances in technology have provided us with invaluable new knowledge about our petroleum resources. This knowledge has helped us to better appreciate their size and enhanced our ability to recover these resources.

I would like to emphasize that all of our reserve estimates are extremely conservative and you can rest assured that our booked reserves are very real.

But what about the future, you may ask? We take the issue of

oil production taking seriously and are constantly monitoring and assessing the latest data and trends. I am happy to report to you that our analysis gives us reasons to be optimistic about the future. Current world proven reserves are estimated at 1.2 trillion barrels. The U.S. Geological Survey estimates that another 1.3 trillion barrels of oil and natural gas liquids will become available in the future. This will come from undiscovered resources and more accurate assessment of reserves located in existing fields. The additional oil raises the conventional liquid reserve and resources to over 2.5 trillion barrels.

But that's not all. There are vast amounts of unconventional heavy oil and bitumen. The in-place volume of these two resources is estimated at about 3.7 trillion barrels -- 570 billion barrels or 15 percent of these resources are expected to be recoverable. Based on the current global oil consumption rate these conventional and unconventional oil resources would last for more than 100 years.

Some pessimists are even suggesting that output from Saudi Arabia's oil fields is set to decline sharply in the next few years. Let me reassure you, this is not the case. As I stated previously, the reserves reported are there, in fact the estimates are quite conservative and there is considerable upside potential to book additional reserves. None of our booked reserves require enhanced recovery techniques.

We are confident there is more oil to be found in Saudi Arabia. There are vast areas of Saudi Arabia yet to be explored. They present great opportunities for new discoveries. We expect the cumulative impact of these new finds to be quite significant.

On this point I want to be clear, ladies and gentlemen. We have more than sufficient reserves to increase production capacity and are committed to do so in line with demand growth. We also possess the human, financial and technical resources to do the job. Our technical experts in a previous presentation here have shown clearly that Saudi Arabia could without much difficulty raise output from 10.5 million barrels per day to 12 or 15 million barrels per day and maintain that level of output for 50 years or more. How can we do this? We can do this because of our vast resources and because we are extremely careful in producing the oil fields. We'll produce them slowly with the aim of maximizing overall recovery wherever companies may look at a 20 year production profile we are looking to produce our fields for 70 to 100 years. This is our guiding principle and a principle we will not compromise for short term expediencies.

Let me say a quick word about technology. History has shown

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that technology has dramatically lowered the cost of finding and producing oil. New technologies like 3D and 4D seismic, horizontal drilling, and sophisticated computer modeling have all had a dramatic impact on our industry. Granted, when used incorrectly technology can be detrimental, but I firmly believe that with careful application future technologies will provide us even more effective tools to find and produce more oil while reducing costs from what they might have been.

It is undeniable that the world will eventually run out of oil. Demand is projected to increase and to the best of my knowledge oil continues to be a depletable resources. The relevant question is not if, but when. On this, we feel fairly confident. We believe that there will be no shortage of oil for at least the next 50 years, perhaps much longer. And as I stated previously, based only on our knowledge of our currently proved reserves, we believe that Saudi Arabia could produce at substantially higher levels for the next 50 years. We believe that reserve additions will enhance our future production capabilities over and above what they are currently.

We are able to state confidently that sufficient quantities remain to make oil an important source of energy for many years to come. We believe there are sufficient reserves in Saudi Arabia and the rest of the world to last until there is an inevitable transition from the age of oil to the next great source of energy.

I remind the audience that the shift from coal to oil which occurred in late 19th and 20th and early 20th Century did not occur because the world ran out of coal. It occurred because oil proved to be the superior energy source. Eventually technological advances will usher in a new energy resource to replace oil. Oil will not cede its position as the preeminent fuel because the world runs dry but because technology has rendered it less desirable.

We in Saudi Arabia believe there are sufficient quantities of oil left to make the transition to the next great energy source a smooth one.

Turning to a subject which is on the mind of many of you in the audience I would like to say something about current oil prices. I know everybody is interested in that. [Laughter]

We have heard some commentators question Saudi Arabia's commitment to the \$25 OPEC basket price and to the \$22 to \$28 price range. Let me set the record straight on this issue. Saudi Arabia continues to be committed to OPEC's \$22 to \$28 price bands

and believes that an OPEC basket price of \$25 is a fair one for both consumers and producers. However, oil markets are complex and not subject to control by anyone. Even Saudi Arabia and other members of OPEC with their vast reserves have only a limited ability to keep prices in their preferred range.

This is particularly true when the primary factors driving prices are things other than the supply and demand of crude oil in international markets. This is the case today.

Let me expand on this point. There is no general shortage of crude oil in today's market. Supplies are readily available. Any buyer or seller of crude oil will tell you this. Rather, prices are being driven by other factors including fears of instability in key oil-producing countries and regions, the movement of large investment funds into communities like oil, just in time inventory practices, refining bottlenecks and the industry's struggle to produce sufficient quantities of spec gasoline in the U.S. that meets currently mandated environmental standards.

In the U.S. a plethora of state and local regulations have vulcanized the gasoline markets placing increasing strains on refiners to meet local demands.

On this occasion let me state emphatically that Saudi Arabia is willing and ready to invest in two new 500,000 barrel per day refineries and their associated marketing facilities in the U.S. to help alleviate some of the bottlenecks in product availability. Some place the blame on OPEC saying the organization is purposely pushing prices higher. They cite as evidence OPEC's decision to cut output. I should like to correct this misunderstanding.

When OPEC decided to cut output the decision was based on the best information from the world's leading industry experts including the IEA and the AIA who were all saying that crude supply was running ahead of demand which indicates that the stage was set for a significant deterioration in oil prices in the second quarter of this year.

OPEC's goal in taking this action was to maintain a balance between demand and supply based on what was the best information available was telling us. It was not a move to abandon the \$22 to \$28 price band for higher prices.

In retrospect, demand was much stronger in the first quarter than the experts anticipated. Projection of worldwide demand for 2004 increased from one million in the projections in November 2003 to 1.7 million barrels per day recently. Five upward

revisions of demand in five consecutive months.

Now what will the second quarter look like? Will the experts' original expectations for downward price pressure prove to be correct? There are signs that worldwide inventories have begun to build but no one really knows for sure. However I promise you that we and our counterparts in OPEC will continue to monitor developments very closely and will take appropriate action to maintain the stability in oil markets.

I must caution that OPEC is only one factor that impacts oil prices and the higher crude oil production does not guarantee that there is more gasoline available for U.S. consumers.

Ladies and gentlemen, I would like to leave you with the following points. First, the U.S. and Saudi Arabia have shared for many decades a commitment to ensuring the availability of sufficient supplies of energy to meet the needs of the world's growing economies. We share an appreciation of energy's role as the raw material fulfilling the aspirations of mankind.

Both of our countries also understand the importance of stability in the oil market, security of supply and reliability of deliveries. That's why Saudi Arabia has committed ourselves to the world's most reliable supplier of energy. We back up this commitment by having nurtured and developed an oil industry whose capabilities I am proud to say are second to none. We do it through a massive commitment of financial resources to acquire the latest technologies, to attract the brightest mind and to train a modern workforce able to meet the challenges of the 21st Century. We do it by maintaining spare production capacity and regional supply relationships even when they run contrary to our short-term economic interests.

Second, the future for oil and the oil industry is a bright one. This is not the end of the age of oil as some pessimists have been saying. There is plenty of oil left to be found and produced and petroleum will remain the dominant energy source for years to come. I assure you that Saudi Arabia's reserves are real and that we have the potential to produce at much higher rates in line with the growing demand for many years.

Yes, the age of oil will eventually come to an end but we see no shortages on the horizon and there is no reason for pessimism or panic. Pessimism and panic undermine oil market stability. There is time for progressive research and development and I see no reason that we should not experience a smooth transition to the next great energy source.

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Finally, ladies and gentlemen, we will continue to face many challenges in the future as we have in the past. Perhaps the greatest challenge we face is to meet the world's growing appetite for energy. The U.S. and Saudi Arabia share a long history, working side by side we have achieved much. Working together in the early days we overcame harsh conditions and extreme hardships and brought Saudi Arabia's vast petroleum resources to world markets. We continue to share a strong interest in stable and secure oil markets and we both understand that stability and reliability are not achievable without demand and supply security. We have much to build on and I believe working together we can pave the way for a better future for the world and its people.

Ladies and gentlemen, thank you very much.

[Applause]

**General Brent Scowcroft:** Thank you very much Mr. Minister, for that firm and confident presentation of Saudi oil policy, plans and capability, and for your analysis of the world oil market.

Before I introduce the next speaker I would like to ask you to prepare questions for our speakers on the cards which I believe have been provided to you. Frank Verrastro will gather the cards and organize the questions for use following Secretary McSllarrow's speech.

Now it is my great pleasure to present to you Secretary Kyle McSllarrow, the Deputy Secretary of the Department of Energy. Secretary McSllarrow is filling in today for Secretary Abraham who was called away to California.

Secretary McSllarrow is familiar to many of you from his successful career in the Congress, the Executive Branch, and in political campaigns. In Congress he served as Chief of Staff to the late Senator Paul Coverdale and as Deputy Chief of Staff and Chief Counsel to Senate Majority Leaders Bob Dole and Trent Lott.

President Bush appointed him Deputy Secretary of Energy in 2002. In that capacity he serves as the Chief Operating Officer of a department responsible for 100,000 federal and contract employees, 17 national laboratories and a budget of \$23 billion.

In addition to these responsibilities he serves on the President's management council and as the American Chairman of the U.S. Energy Working Group established by Presidents Bush and Putin.

It's been my pleasure to work with Deputy Secretary McSlarrow in several advisory capacities on issues relating to Department of Energy's nuclear weapons responsibilities and non-proliferation.

Secretary McSlarrow, it is a great pleasure to welcome you to the podium.

[Applause]

**DepSec Kyle McSlarrow:** It's been the bane of my existence to have a name that starts off with four straight consonants, but General Scowcroft, thank you very much. It's a real pleasure to see you again. I've told my wife that apparently when you serve in a high enough capacity in government, when you leave government you don't actually leave it. The only difference is you end up getting called back to do duty, they just don't pay you any more. But we want to thank you for your continued service to our nation.

Mr. Al-Naimi, it's nice to see you again. Secretary Abraham does his regrets. He's out West. He and I have a great personal respect for you and your team and we've enjoyed working with you and I look forward to continuing that relationship in the future.

Let me just say I think the Minister spoke very well to the relationship that we have with Saudi Arabia. It's a deep and vibrant relationship. It really does transcend oil, although including today that's often what we speak about. But even in today's environment where we are shoulder-to-shoulder in the war on terrorism, I think it's clear that even though there may be challenges in the relationship and we may not always agree, there is much about which we do agree, and that's often lost.

In thinking about global energy security, it's obviously a fairly broad phrase and both the United States and Saudi Arabia loom large in any global energy security structure. There are a couple of ways you can come at it. Obviously my perspective as the Deputy Secretary of Energy is to think about it in terms of our policies and what we are pursuing, but I would submit that our policies, our agenda for the future is one that we think is a win/win for producers and consumers. It's one where we think that both the United States and Saudi Arabia can agree. It's one that envisions continued cooperation and collaboration in the future. And it may not necessarily be what people think it's going to be. I would say really two thoughts to encapsulate this. That is in terms of what we are trying to achieve, first today what we're trying to achieve I think can best be captured by the phrase

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diversity of supply. And tomorrow, that is the long term, 20 years and out, I think can best be captured by the phrase diversity of fuels.

In the 1970s when people talked about energy security they really were talking about whether or not we were going to secure enough energy to meet our fundamental economic needs. Now it tends to be whether or not we have enough supply in the free market at reasonable prices to support economic growth. The good news is that generally we don't have to worry about disruptions where people simply cannot supply enough oil or other energy commodities to meet demand, but that doesn't mean that there aren't a lot of challenges.

I know Guy Caruso who's here somewhere will be on a panel later on today who's the head of our Energy Information Administration so I'll let him run through numbers, but just a couple that I think capture the point which is that in the market today we're producing say 80 million barrels a day, that's forecasted to, demand is forecasted to rise to 120 million barrels a day in 20 years. In the United States whereas today we import say 55 percent of petroleum, that's forecasted in 20 years to rise to 70 percent. So our policy in terms of oil in this Administration has been to support increased production, not just in OPEC but in non-OPEC countries as well. In order to do that because we're talking massive amounts of investment and massive amounts of financing that is needed, we've been very supportive of an investment climate that would encourage exploration and production in the United States as well as other countries. And I personally and Secretary Abraham personally have spent a lot of time talking to our colleagues -- whether it's OPEC Ministers or other colleagues and energy ministries in other non-OPEC countries, talking about the movement of capital, what it takes, what would meet their needs and our needs, and that's a long-term prospect but there's clearly a lot going on in the world today in terms of increased investment and building out not just the production capacity but the infrastructure to deliver it.

But in addition to fundamentally raising supply here in the United States, we have to recognize that we need to do more on the demand side as well. So part of our policies have been to push Congress to allow President Bush to raise fuel economy standards on light truck vehicles including SUVs. We have supported tax credits, for example, for hybrid vehicles which would be more fuel economic. So we have to pursue both at once. In the United States we often get caught in the trap of either you're for supply or you're for lower demand but the truth is you need a balance and that pervades everything we do when it comes to energy policy. We need more supply, we also need to be more

conscious of how we use energy in general.

When it comes to natural gas in recent years, and my guess is that Alan Greenspan will talk to this at lunch, but production has been flattening out in the United States and in Canada. There was a time when we supplied all of our needs in terms of natural gas production. That changed some years ago to the point now where most of the imports that we get are from Canada, about 15 percent, and in recent years the four regassification facilities, all four of them are now operational so there's an increased amount of investment and activity, let alone imports of LNG into the United States.

But gas is not yet a global commodity, at least not in the same sense that petroleum is and so there is a lot of activity to focus on how we can make LNG a bigger part of the energy security picture around the world, and here too, although it's not often remarked in this country, Saudi Arabia has an important role to play. We were pleased that Minister Naimi came to a summit on LNG late, I guess it was in the winter time. Saudi Arabia in addition to having the largest reserves of oil obviously also has I think the fifth largest reserves of natural gas. So there is an important global commodity market that is emerging that will have I think a tremendous impact in the future.

As we seek the diversity of supplies around the world we do so with no illusions. We all recognize the importance of the Middle East when it comes to supply, and we all recognize the leading role of Saudi Arabia. I think the Minister mentioned proved reserves of 261 billion barrels. Whatever the right amount is, it's a lot. The Kingdom and the United States have a shared view about stability and security in the marketplace. For example, the Kingdom has invested in a pipeline infrastructure and networks to reach both its coasts and they've insured that they, as the Minister said, have adequate surge capacity to meet a case of disruption so they can help mitigate disruption. And as he said, they've delivered on that responsibility. I know very well over the winter of 2002 when we were dealing with the strike in Venezuela where you literally had production shut down for a number of weeks and crippled for a longer period of time, and then obviously the strife in Nigeria as the Minister mentioned and the war in Iraq, they stepped forward. We welcomed that and we appreciate it.

So we do share a common goal of stability and it has been a relationship and a cooperative spirit that has been borne out in times of crisis.

We in our turn maintain a strategic petroleum reserve for

precisely those kinds of circumstances, and as we've made clear in a case of significant supply disruptions that's what it's there for. It's a national security asset. It's not there to manipulate the markets or to manipulate price.

This is not to say that we don't have some fundamental disagreements from time to time. I think we've made clear our views and our disappointment in the recent OPEC decisions but we can talk to each other about those. We don't necessarily have to talk, as I like to say to my friends in the press who follow us around, don't necessarily have to talk through the press to each other. We can pick up the phone and talk about these things and these conversations are often more mundane than you would think because there's only so long that you can go on talking about inventories before people's eyes glaze over, but these are pieces of information in a market that is fairly complex about which there is a broad diversity of opinion. And if there weren't, somebody out there could make a lot of money. And if I could ever figure it out I could do the same thing.

But the truth is it's very complex, it's much larger and more complex than any one individual or any one nation, and so we do need to talk. We've been very pleased to join Saudi Crown Prince Abdullah's call for enhancing the producer/consumer dialogues that have taken place over the last couple of years and I think Minister you're going to see Secretary Abraham at the IEF in Amsterdam where the continuation of that producer/consumer dialogue will take place. And these are important to do in their own right but they also help us understand each other in terms of the different perspectives and sometimes they are fundamentally different perspectives about what's actually happening in the market because fundamentally what we're talking about are decisions about the future, and the future is unknown and sometimes you get it right and sometimes you get it wrong.

But I also think there's a tendency to put too great a stress on our relationship with Saudi Arabia in terms of oil. It is in my view unfair to that relationship that we expect in the United States that all our problems will be solved by others. I think our relationship will be stronger the more we in American can engage in some self-help.

One of those things, and in fact it's often been remarked that the United States could do it sown consumer/producer dialogue. I mean we're one of the largest producers in the world as well as being clearly the largest consumer in the world. So we have these debates from time to time about continued proposals that we've put forward to explore, for example in Anwar and Alaska, where on the one hand you're talking about 2,000 acres

that would be affected in terms of exploration and production, potentially up to a million barrels a day. And it's an interesting thing that the very same people who will argue that an OPEC production cut say of a million barrels a day is a significant thing, are also quick to say a million barrels a day from Anwar is insignificant. We can't have it both ways. We do need to work with our friends and our producers overseas, but we also need to get our own energy house in order because we do send our own signals. When we don't pass a comprehensive energy bill, and they may not be the signals that we actually intend to send.

I mentioned at the outset that there are really two themes, one in terms of diversity of supply, but tomorrow, that is the long term. In the short term I think what we're going to end up moving to is a policy, an enactment of diversity of fuels. By that I mean in just the brief time that I have left, I'm really talking about the move toward a hydrogen economy. I think it's clear, we need to understand what that means and what it does not mean.

President Bush, I think most of you know, established a vision announced in the State of the Union in 2003, a vision of a hydrogen powered fuel cell vehicle whose emission was only water, that could begin market penetration sometime in the next 20 years. And it is clear the environmental benefits of that, but I think it's less clear what the energy security aspects are.

As I said earlier and as the Minister noted, there are some significant challenges in terms of capacity to produce oil, maybe not in the next 20 years but certainly the next 40 to 50 years. I agree entirely that the nay-sayers have been routed pretty well over the last 50 years, and nonetheless as he also noted, it will come to an end at some point. The question is what will replace it, and are we really going to wait until that point before we figure out what happens?

The President has made clear for America, but we're doing this in concert with a lot of countries around the world, that we need to start now in thinking through how we move to a hydrogen economy. And in terms of energy security, what it really means is this. In America, if you just take sort of the two large energy accounts -- electricity production on the one hand and transportation on the other, they're very different. In electricity production nuclear power counts for about 20 percent; coal accounts for about 50 percent of electricity production; natural gas is an increasing percentage, is now the fuel of choice in the future; and then you have renewables including hydropower which are ten percent or lower.

If you look on the transportation side of the ledger it's of course all petroleum, and increasingly a higher percentage of that will be imports into the United States. We are a great trading nation. We are not going to get to the day where we are "independent." But it doesn't matter what country you are and who's supplying you, any time you're dependent for 70 percent of any one commodity that is not a desirable position to be in. What we're trying to do with the hydrogen economy is take a lot of domestic resources, that is coal, natural gas, nuclear and so forth, and use them for the production of hydrogen. Hydrogen is not an energy source itself, it's an energy carrier. It has to be produced, and it can be produced from natural gas, from coal, from nuclear, from renewable energies like solar and wind.

We're not sure what mix that would be in the future but we know it will be some mix of all of those. And that's not to say that as the Minister noted that we're getting to the end of the age of oil. We are not. It's a question, and one reason why I believe, and I'll let the Minister speak for himself, one reason I believe this is an activity and a vision that's embraced which may be counterintuitive is because we all recognize that we're not talking about replacing the economy of today but we are talking about, again, providing balance. So our estimates are that with the hydrogen economy that the President has put forth, that in 2040 we reduce our consumption of oil 11 million barrels. That's not completely replacing our dependence on petroleum as a major feedstock to industries and it's a major driver in transportation, but it's not insignificant either.

So what happens 50-75 years from now I can't say. I think it will be, as the Minister said very well, it's likely something we haven't even thought of. But we do know that the hydrogen economy is something we need to drive toward, and we believe that it's something that's a vision, that's a new idea, that can be worked on and shared with all our friends including Saudi Arabia.

Just to close out here and then I guess we're doing a little Q&A session. We may disagree on what's required for stability in the marketplace in some instances, but we do agree on promoting stability. The United States and Saudi Arabia agree on helping each other in crises and in promoting economic growth. To do this we will continue to expand and strengthen our dialogue.

I'm delighted to be here. Thank you again.

[Applause]

**General Brent Scowcroft:** Thank you very much, Mr. Secretary, for that comprehensive review of U.S. policy and perspectives on

this critical issue. Now it's time to hear from the audience.

Frank, will you deal with the questions?

**Frank Verrastro:** Thank you, General.

I'm Frank Verrastro. I'm Director of the Energy Program at CSIS and welcome you here today.

I'd like to thank our panelists as well. It's an extremely timely event and an important event. We have a number of questions and they seem to revolve around three major themes as you can expect -- oil prices, gasoline prices, terrorist activity and OPEC's activity.

I would recall in February when I visited with the Minister in Dhahran, we sat down and the first thing he said was, what do you think about what's happening in the marketplace? Which took me a little aback. I said I think the demand numbers are wrong. He said me too. I think that's one of the things that's happening here.

Our first question goes to Chinese demand, and it says, "The IAEA seems to have underestimated China's demand. Does Saudi Arabia have a better insight into the level and sustainability of China demand going forward?"

Then there's a second question that follows onto that and it says, "We haven't seen much of a demand response to higher oil prices, especially gasoline. Does this change OPEC's view of global price elasticity?"

Mr. Minister.

**Minister Ali Al-Naimi:** I was in China just a few weeks ago and I have been visiting China since 1992, and every time I am there I am impressed by the activities, the construction, the number of cars on the road. So I would say if anything, people are underestimating China's demand. By how much, I don't know. But I will tell them what I have told you, that we in Saudi Arabia we are ready to meet their demand. Of course we are not the only supplier to China. There are others who are supplying it. But I have assured them that no matter what their growth is we are ready to cope with it. Not at the expense of our other markets, because we have important markets in the U.S. and also in Europe, but nevertheless, I would say if anything it is underestimated.

On the question of elasticity of demand, gasoline demand, I

am really not an expert on the gasoline issue in the U.S.. Maybe somebody else in the audience can handle that better than I can.

**Frank Verrastro:** We have Guy Caruso and Mr. Jum'ah that will speak on the next panel, but Kyle, would you like to add anything to the gasoline demand?

**DepSec Kyle McSlarrow:** No I think I'll let the economists wrestle with that. [Laughter]

I will note, not that it makes us feel any better, but I think the high point for gasoline prices was I believe in March of '81 and in 2004 dollars I think it would have been about \$3 in today's value. So it's clearly not the highest it's been. It's still not satisfactory.

**Frank Verrastro:** I would just add that for those of you that had a Grande Latte on your way to the conference this morning, you know what the prices look like. [Laughter]

"Mr. Minister, in light of the attack on the Basrah terminal how concerned are you about terrorist activity on facilities and infrastructure and what are you doing to secure those facilities in Saudi Arabia?"

**Minister Ali Al-Naimi:** You are I'm sure following what the King of Saudi Arabia is doing, trying to combat terrorism in Saudi Arabia. I think we have been very active. I believe we have been successful in either eliminating or capturing many of the terrorists in Saudi Arabia.

As far as our facilities are concerned, I think if you compare them to any other facility in the world, I believe they are the most secure facilities anywhere. We have multiple security measures, whether talking about physical hardware to protect the facilities or human resources, we have a redundancy in the human resources, we have a redundancy in the hardware in the facilities, and I like also to assure you that we have many terminals to ship from, not only one. We have the greatest terminal on the Gulf, we have a huge terminal on the Red Sea, and I believe, again I will repeat, if there are any facilities secure from any terrorist attack it is in Saudi Arabia.

**Frank Verrastro:** Kyle, would you care to comment about the U.S. infrastructure?

**DepSec Kyle McSlarrow:** It's much the same. We have known for a long time that a variety of infrastructures are potential targets and we work closely with industry to make the defenses

more robust and it's one of these things where you do everything you can, you have to stay vigilant. I think we've had tremendous cooperation and response from industry and so we'll just, every month it gets better, and every month after that it gets better still and we'll just keep working it.

**Frank Verrastro:** This is for Deputy Secretary McSlarrow. It's a little bit off-point, it talks about LNG.

"You mentioned in your remarks some of the dangers of reliance on imported energy. What's the Administration's position with respect to LNG imports since they are direct power generation needs, not just our transportation sector?"

**DepSec Kyle McSlarrow:** On LNG, and as I said I think Alan Greenspan will speak to this point much more eloquently than I could, but it is clear if you just took, and I'll steal some of Guy Caruso's thunder here, but it is clear if you look at our forecasts at least in the United States in terms of the pricing levels for natural gas, that you're still talking about expensive natural gas 20 years from now, but that assumes we built an Alaska pipeline, we built the McKenzie Valley pipeline, and I think we had like seven or eight more LNG facilities, all of which are challenges in and of themselves.

So it's clear that LNG has to play a growing and significant part of the market in terms of the United States, but it is also clear that we're not going to be able, nor would we want to be in a position where we are completely reliant on that in the future. It's a market that has developed over recent years. In some ways it's a sleeping giant. I think people don't even understand how robust it already is. But in terms of citing facilities in the United States, we haven't done that in a long time. So there's still a lot of regulatory hurdles and other hurdles that we have to get through, let alone the capital investment climate.

**Frank Verrastro:** Minister Al-Naimi, "How does Saudi Arabia feel about disclosures and third party verification of reserves?"  
[Laughter]

**Minister Ali Al-Naimi:** That's a good question. I think it is much more important -- First of all I think you know the problem with third party assessments. I think Enron is a good example.  
[Laughter]

But now let me say this. I think it's extremely important to recognize that integrity is extremely important. We have no reason, I think our experts here in February tried to demonstrate the technology we use and it's very high. We have really no

reason to report other than what we believe is in there.

I think if you feel comfortable with third parties I feel a little bit bothered after spending over the last 70 years so much money, so much effort to honestly understand the behavior of our reservoirs, of our fields. We have examples of how long reservoirs and fields have been producing. If I mention one I know everybody is concerned about the [Ghawar] field. We have been producing the [Ghawar] field for the last 30 years at about five million barrels per day except for a short period in the '80s when demand was very low. We see absolutely no decline for the last 30 years. We don't see a decline eminent. I believe we have been producing it, again, for the last 30 years and the water cut we have seen is 33, 38 percent water. For that long at five million barrels per day that's very good.

I would say that I think we are in a much much better position to know the performance of our reservoirs, to know the performance of our oil fields, than any third party that will come in.

**Frank Verrastro:** This is for Kyle. This is what public servants get paid for.

"The Minister spoke about a fair price being about \$25 a barrel. What's your view of a fair price?" [Laughter]

**DepSec Kyle McSlarrow:** A fair price, as we say in public and in private, is what the market sets. I won't treat it as flip as that just sounds, but that's really a true statement and it really underpins our entire approach in terms of the consumer/producer dialogue, in terms of our conversations with our counterparts and how we pursue policy and energy generally, not just the oil markets.

But we believe that supply ought to respond to the demand signals and the pricing mechanism obviously is the best indication of that, but it ought to be following what demand is telling you, so that is what we encourage.

**Frank Verrastro:** "On refinery policy, Minister Naimi you spoke about building two new refineries in this country. The last refinery built here, grassroots refinery, was 1972. Can you elaborate on that? Do you have any more specific thoughts on it? And Kyle, what would the U.S. Administration be willing to do, or do you have a position on refinery construction?"

**Minister Ali Al-Naimi:** As far as the refinery, this is an offer from Saudi Arabia. Now whether we will be able to get the

permits to do so is another question.

Someone one time told me in order to get a permit, and this may be exaggerated, to get a permit to pursue the process by which you can build a new facility like a refinery it takes about \$70 to \$100 million. I would say that is a very expensive price for a permit, but if that is what it takes --

You know that the gasoline that you find in the gas station doesn't come out of an oil well. It has to come through a refinery. And if there is shortage in refinery you can either expect somebody else to build it outside but then you turn around and make it difficult to import it because of the local regulations. Therefore you have to build a refinery where the market is. Generally less than 15 percent of gasoline is traded worldwide. Eighty-five percent of gasoline consumed is produced locally.

So I would say that we will do our best to get the permit and proceed.

**DepSec Kyle McSlarrow:** Two thoughts. First, we of course welcome investment in the United States and if you can figure out the regulatory regime and get something permitted, good luck, let us know how you did it. [Laughter]

But let me also say there are many issues with connections but I think it's important to understand what problem we're solving and what we're not. There is a refinery constraint problem in the United States. That's very clear. I think we've got a capacity of like 16.7 million barrels a day which is dipped down, and as we said it's been decades since we built a refinery.

But in our view that is not the same thing as saying that that's the driver for gasoline prices today. Our view is the price of crude is driving the price of gasoline in the United States and probably the best proof, if you will, of that is that our refineries are running below 90 percent utilization today, so we're not even using the excess capacity, although in the summer the runs will probably be 95, 96, 97 percent utilization at that point.

What is critical and why the offer is appreciated is that we are in such a constrained market and inventories are so tight that if anything happens, we don't have that excess refinery capacity that can take up the slack. So in that sense additional refinery capacity would be very welcome.

**Frank Verrastro:** Deputy McSlarrow has to leave for a

previous engagement. He actually moved his schedule around to join us this morning. So I'd like you to join me in thanking him for his attendance and your comments.

[Applause]

**Frank Verrastro:** "Minister Naimi, you talked about the other factors that contribute to gasoline prices. What in your view is the contribution of hedge funds and speculators?"

**Minister Ali Al-Naimi:** Watching the weekly reactions you see, when you see the funds go long the price rises; when the funds go short, prices go down. So I would say they have a short-term significant impact on the price. I don't believe that they change the fundamentals. The fundamentals are supply and demand in inventories are what determine the ultimate price. I don't think anybody has any impact, significant impact on the price other than fundamentals. But there are situations like political tensions, wars, storms, funds moving in and out, all of these impact the price. But these are short-term aberration to the price, they are not the fundamental price mechanisms.

**Frank Verrastro:** We've talked about reserves and productive capacity, and we talked about sustainable capacity in excess of ten million barrels a day in Saudi Arabia. How quickly could Saudi Aramco reach 12 or 15 million barrels a day, and could that be sustained?

**Minister Ali Al-Naimi:** We have two things. One is the 10.5 million is there today. We are not producing that. We tried when we were trying to supply the markets last year, I believe we got up very close to capacity for a short time to make up the shortage. That can be brought on very quickly. We say in our policy that we need 90 days to take production up to maximum capacity and sustain it thereafter, the 10.5.

Now as far as the 12 or 15, that will take time. But you know how well we have been executing projects. I believe we brought on Shaver, 500,000 barrel per day increment in 18 or 24 months, if you take it from day one to the end. We are now bringing another increment, 800,000 barrel per day increment, combination of Abu Sa'Fah field and the Qatif field and I believe that will, [Sir] Jum'ah can answer those later on but I believe that's also another 24 months.

So our ability to execute big projects is well proven, well demonstrated, and we can do them very quickly.

For your information. We know today, we have looked at

simulations of where the 12 million will come from or where the 15 million will come from. We have also looked at what kind of facilities we need if demand were to require such a capacity. As I have said in my presentation, we are ready to do so provided demand is there. We're not going to build unnecessary capacity when we don't need it. We have enough capacity today.

**Frank Verrastro:** And no surprise, the last two questions also are on price.

"There are many calls within OPEC for a higher price band. There's reportedly a study within OPEC to raise the price and Venezuela plans to ask for a \$2 increase in September. Is there a fissure developing in OPEC on pricing issues?"

**Minister Ali Al-Naimi:** No, I don't believe there is a fissure. There is dialogue and there are expressions of desires by some of our members.

In OPEC there are hawks, there are doves, and there are moderates, and I would say Saudi Arabia is a moderate. In OPEC we have been moderate for a long time.

I believe that OPEC in general is committed to the band. The confusion in today's mind is the dollar's value and should the price be higher. But I can assure you that Saudi Arabia is committed to the band and committed to the \$25 target of the band.

**Frank Verrastro:** And since this is Washington, I guess this didn't come up in New York, but "There's been a lot of speculation about Bob Woodward's book." [Laughter] I thought we were going to get 20 of these. "Was there a Saudi pledge to lower oil prices before the election?" A simple yes or no answer. [Laughter]

**Minister Ali Al-Naimi:** No. There is no, and normally we do not allow or make oil issues interfere with local politics, whether in the U.S. or any other country. The answer is no.

**Frank Verrastro:** Thank you.

The final question is a foreign policy question. "Can you present your views on Iraq or the Palestinian question in terms of political instability in the Middle East?" And General Scowcroft, if you have comments I'd appreciate them as well. And how much that's playing to. Do you think it's more or less stable.

**Minister Ali Al-Naimi:** The Middle East?

**Frank Verrastro:** Uh huh.

**Minister Ali Al-Naimi:** That's easy. I think if we did not have Iraq and if we did not have the Palestinian/Israeli issue, the Middle East would definitely be much more stable. That's an easy question. [Laughter]

**General Brent Scowcroft:** But if we didn't have Iraq and if we didn't have the Israeli/Palestinian problem we wouldn't have a Middle East almost. [Laughter]

**Frank Verrastro:** Well put. I knew you'd come up with something.

I'd like thank our panelists. We're going to adjourn for about 15 minutes. We'll be back at quarter of.

[Applause]

**AFFORDABLE ENERGY, ECONOMIC GROWTH**  
**The Security and Stability of the Oil Market**

27 April 2004

**Bob Ebel:** Thank you very much. Let me turn the podium now over to Dan Yergin who will moderate this upcoming pattern.

**Dan Yergin:** Thank you very much, Bob. On behalf of really everybody who's participating in this session express our appreciation to CSIS and to the U.S.-Saudi Arabian Business Council for bringing together this very timely discussion. I think we would all say that the timeliness is very clear to everyone in this room. We are indeed looking at a reality of a tight oil market and in some ways an extraordinary oil market that takes place against the backdrop of a very strong economy. We just had the meeting of the IMF and the World Bank here in Washington where a very optimistic view of the global economy, at least as of April 2004, the possibility that this will be the best economic year in a generation. That is one of the things that has translated into a very strong oil market, and that's one of the things that really sets the context for the discussion we're going to have on this panel.

World oil demand growth this year is probably going to be double the average of the years 1998 to 2003 which gives a sense of the strength of the market, and as we know, and Minister Naimi referred to it, the demand estimates in response to a strong global economy have continued to be raised over the last few months.

At the same time, of course, supply has been constrained. There have been a series of disruptions, all of them managed over the last 17 months, and spare capacity is, well, rather spare right now. This has given rise, as Minister Naimi described to once again this fear that the world is running out of oil. As he noted, we've gone through cycles of these. One of my favorite is in the 1880s when one of the founders of the standard oil trust began selling off his shares in Standard Oil because the engineers told him there was no oil to be found outside Pennsylvania. So it's been going on a long time.

But as the Minister I think emphasized, the role that's often underestimated is of technology, and it's not just an incantation to say technology, but it's part of the fabric of the industry and I think as a student of the industry it strikes me that often the public outside the industry doesn't understand

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what a technologically driven industry this is. So the strong market is one element to the context of our discussion.

The second is this striking geographic shift in supply and demand that's going on. Over the next decade most of the growth in world demand and supply will be outside of what is at least currently the OECD. And as is evident, China and Russia loom large. It's useful to quantify what that means.

Between 2000 and 2003 China accounted for 35 percent of all the growth of oil demand in the world and Russia for 75 percent of non-OPEC supply growth.

The third characteristic or part of the context was the one that Kyle referred to which is that the U.S. really is on the threshold of a new era in natural gas, and this has major implications. In a sense the U.S. is today in natural gas where it was 30 years ago in oil, about to go from being a minor importer to being a major importer, and a decade from now the United States could literally overtake Japan as the world's number one importer of LNG. That will add to the dimensions of energy security that we talk about, a host of new energy relations, and give a larger dimension to the conversations.

Amid these changes, of course, some things do remain fundamental and with continuity and one of them is Saudi Arabia's unique role not only as a supplier but as responding to supply disruptions. It's very striking in the last 17 months alone, Saudi Arabia has helped to offset disruptions from Venezuela, Nigeria, and Iraq. No other country could have played the role that Saudi Arabia did and continues to do.

Now there's a second dimension which I think draws out some of Kyle's remarks, which is and does provide part of the context which is as we think about it a kind of changing meaning of oil security and energy security. For 30 years the focus has been on the smooth flow of oil, dealing with or anticipating, preventing disruptions. But now in the last few years the definition of energy security has been widened out. To really include infrastructure and the entire supply chain because we recognize that the entire supply chain is a target as was demonstrated this past Saturday. I think we need to think through the implications of that for the private sector, for governments, for international cooperation, and some of the elements of new emphasis are, of course, what's already been addressed which is enhancing physical security, deepening the notion of diversification, a focus on flexibility and resilience, whether measured in spare capacity, strategic stocks or the resilience and flexibility of the entire supply system.

Something else I think that's very important which you can't quantify but really is critical for how you operate in this kind of era which is the importance of communication and the kind of dialogue that's represented in this conference and this discussion today.

So I think that provides really, when we talk about energy security, the context of what we're going to try and do in our panel this morning.

Abdallah Jum'ah is the President of Aramco, the world's largest oil producing company, by far. He'll describe the role that Saudi Arabia plays. Rex Tillerson, who's the President of ExxonMobil brings a global view and perspective to addressing these issues. And Guy Caruso, the head of the Energy Information Administration will look at the dynamics that will drive the oil market in the years ahead.

And in our discussion we will go now in reverse order. We'll begin with Guy who since 2002 has been the Administrator of the Energy Information Administration which as most everybody here knows provides independent data, forecasts and analysis on energy policy. Guy has a 30-year career in energy policy. He held senior positions in the Department of Energy including Director of the Office of Market Analysis, Senior positions at the International Agency, and also was Executive Director of the Strategic Energy Initiative Report of CSIS and also directed the Energy Strategy Report at the United States Energy Administration before taking on his present duties.

So let me turn it over to Guy to provide more context.

**Guy Caruso:** Thank you, Dan. It's a great pleasure to be here this morning. Mr. Minister, distinguished guests, this is quite an honor to appear at this joint conference with CSIS and the U.S.-Saudi Arabian Business Council. I'd like to thank particularly Bob Ebel and Frank Verrastro and Lisa Highland for organizing such a distinguished set of speakers and topics that are so current.

As Dan's introduction said, I've had a lot of association with organizations that seemed to have three letter acronyms -- EIA, DOE, IEA, but I did graduate. For four years I was at CSIS, so I moved up to a four-letter organization. [Laughter]

And when I took the EIA job I didn't realize that every week when we put out our gasoline and oil and natural gas numbers I'd also get some four-letter comments. [Laughter]

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So as several speakers have said, EIA, Guy's the guy with the numbers. Of course it depends on whether they're the right numbers it depends on your point of view. I think Minister Naimi indicated that within OPEC there are even different points of view as to where the market's going and that depends so much on the numbers. Each month when we put out our monthly oil outlook, the IEA does its, OPEC does its own. But clearly when we talk about energy security and the oil market one needs to look at the history of this roller coaster ride of crude oil prices we've observed in the 30-plus years that I've been trying to analyze the market.

External events have played such an important role. Some of them have been political with respect to embargoes and wars and others have been more unexpected events that were not related to policy or war. I mean you even had the '86 collapse in oil prices which was largely a result of Saudi Arabia's decision that it would no longer be the swing producer and would institute buy-back pricing.

So we've had a very rocky road when it comes to oil price projections and outlooks, so this period we're going through, although it's been one of rather steady increases in prices over the last several years, is certainly no different than we've observed in the last 30.

The reasons that we are looking at a very tight market in the near term and our projection is prices for crude are going to stay firm for at least the next two years. That's our latest outlook. That crude prices of WTI, the benchmark crude in the U.S., will be in that \$30 to \$35 range. They've been above \$35 now for the last four months, and to put that into perspective in the OPEC basket the Minister mentioned this morning, it's roughly \$4 less than the WTI average. The OPEC basket runs around \$31 or so.

The reasons are multi-fold. There are a number of factors and I think some of the speakers have alluded to them, starting with rising world oil consumption. Dan mentioned the strong economic growth we're witnessing not only in this country, but as the World Bank meetings last week indicated, it's a global boom in economic growth.

China has been mentioned. Clearly that is a driving force in the world oil consumption growth and we see that continuing as I'll mention later on.

The other one is that although there are about two million

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barrels a day of unused productive capacity in Saudi Arabia, that's about all there is in the world of an 80 million barrel a day economy of world market. So 80 out of maybe 82 total capacity, that's a bit like having 98 out of every 100 seats in every airline that flies every day occupied, and there's bound to be things that go wrong in that type of a tight market situation.

What that has also led to is low inventories. We have low inventories of crude in this country. They've been low since the last part of 2002 with the Venezuelan unrest and really have not recovered to what we believe to be normal range. This is true in OECD countries as well.

Another factor certainly has been OPEC's quota reductions and restraint on production. It's one of the number of factors, but it clearly has had an effect of putting upward pressure on prices and keeping inventories low.

Clearly there's a political uncertainty and a speculative uncertainty that's part of that \$35 WTI that we've seen averaged over the last several months.

There's uncertainty about what's going to happen in Iraq. There's uncertainty about where Venezuela's going to go. And more recently we've seen further unrest in Nigeria. All of these things are adding to the, I would call it asymmetrical risk on the upside of crude oil prices.

Finally, of this long list of factors is the downstream tightness, particularly in the United States refinery sector which again both the Minister and Secretary McSlarrow mentioned this morning. We don't see that changing, in fact we see that tightening as refiners try to meet new specs for low sulfur gasoline, ultra low sulfur diesel, and the banning NTBE in New York, Connecticut and California as we approach the summer gasoline spec season.

To illustrate the kind of demand growth that I mentioned, this chart shows a point that Dan mentioned in his opening remarks. We saw about a million barrel a day average growth in the '90s in world growth. That tempered somewhat with the slowdown in the economies not only in the United States but globally in 2001 and 2002. But now it's picked up and we see a very robust growth of about 1.6 million barrels a day this year. It's about the same as we witnessed last year. We'll be about a 1.8 million barrel a day growth in 2005, and as the Minister and others have mentioned, every time we look at these demand number we tend to revise them upward. This is particularly true in China where demand has been growing at about 500,000 barrels a day per

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year and we see that growth continuing this year and next. That's a major factor in putting such a strain on our global productive capacity.

Now these high prices and the demand growth has brought forth some increase in non-OPEC production. It's been up over a million barrels a day last year and we think it will probably be 1.4 this year and next. But that's not going to be enough because the consumption growth and the need to rebuild inventories will exceed what non-OPEC can add.

So OPEC clearly remains in the driver's seat with respect to this market. And as this chart shows, the OPEC decisions on quotas over the last five to six years have tried to adjust production to meet demand and in some instances to meet uncertainties with respect to supplies in Iraq related to the Oil for Food program during the earlier part of this period, and again as the Minister mentioned, an attempt to bring forth production during times of uncertainty with respect to Venezuela and Iraq.

So we certainly see these OPEC decisions having had a very important influence on keeping prices where they are, and I think one often hears, well the speculators are driving this market. Speculators are keenly attuned to what they hear, see and read about what's going on among the OPEC countries, and clearly that's played an important role in the speculator's decisions.

But more importantly, the key indicator has been inventories. This illustrates how low crude inventories or total oil stock inventories have been in the OECD. They've been at the low end of that five-year min/max range for a number of years now and we see them continuing to be at the lower end of that in 2004 and 2005. That should continue to put upward pressure on prices which is why we think a \$30 to \$35 WTI world is what our forecast indicates.

In the U.S. we've also had low crude stocks, partly because of the Venezuelan situation in late 2002 continuing into '03, but we've really never recovered and we're staying at the low end of that. The last number we released was 295 million barrels of crude. We'll be releasing a new number tomorrow but we don't anticipate moving back into that normal range very soon, and therefore we expect, again, an inventory driven, upward pressure on price.

In the longer run we have very strong growth as Kyle mentioned this morning for petroleum and it's largely driven by the transportation sector. We've got a long-term projection of

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U.S. demand for oil going from 20 million barrels a day to about 28 million barrels a day in 2025, and of that eight million barrel a day growth, almost all of it's in the transportation sector, and we don't see much of an improvement on our domestic production. In fact it's flat to declining. So that our net import position will increase from about 55 percent this year, the chart shows it for 54 percent last year; going to about 70 percent import dependency by 2025.

So the need for increased imports and increased imports from the Persian Gulf area I will discuss a bit later.

But on the global scene we seen fairly steady growth in world energy consumption through the next 20-25 years, but the real message on the global scene is where that growth will be and it's mostly in developing countries. About 70 percent of the world energy growth will be in the developing countries led in particular by developing Asia. China and India are a big part of that growth in world energy demand as by 2025 developing countries and OECD countries will be consuming almost the same amount of energy.

On the oil scene, the share of oil will continue to maintain its market share of about 39 percent. Gas will grow fast because of the desire to use more gas in electric power generation not only in this country but in developing countries, so that we certainly subscribe to the view that's already been mentioned here, that the oil share will continue to hold its own over the next 20-25 years. Ultimately it may peak and decline but our view is the resources, both conventional and unconventional, are adequate to meet this kind of demand.

The demand for oil we see growing from about 80 million barrels a day this year to about 120 million barrels a day by 2025. Now any time one looks that far out as the Minister said our vision is perfect because no one can prove us wrong. It's next month we're really worried about.

But clearly, a 40 million barrel a day growth in world oil demand and supply represents an enormous challenge for both producers and consumers.

We expect, again, much of that growth to be not only the transportation sector in this country, but growing needs for transportation in countries like China, India, and a broader use of oil in developing Asia. So major growth not only in North America but in developing Asia will lead to this kind of picture on the demand side.

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On the supply side we see growth both in OPEC and in non-OPEC to meet this 40 million barrel a day growth in supply. We've got about an 18 million barrel a day growth in productive capacity in non-OPEC countries, and more than 25 million barrels a day growth in OPEC countries, much of which will be in the Gulf country region, and Saudi Arabia clearly will be the main contributor to that growth whether the number in our particular international energy outlook this year, we're saying Saudi capacity could grow to 22 million barrels a day by 2025. We think the resources are there. The Minister certainly indicated he believes they're there, not for that particular number, but to grow substantially from their 10.5 million barrel a day capacity today.

But we'll be watching things like investment decisions and where the investments are made over the next coming years. But clearly we expect a robust growth in both OPEC and non-OPEC sources of crude over the next 25 years.

Let me conclude by saying we see an oil market that remains very heavily utilized at, as I mentioned, with only two million barrels a day of excess capacity, that's a tight world oil capacity situation. Subject to volatility and surprise and we need that two million barrels a day of unused capacity to meet the kind of demand we seen. In the long run, robust growth led by a strong world economy, growth in both non-OPEC and OPEC, and clearly the investment decisions in infrastructure which have been mentioned earlier are critically important to reaching these demand and supply numbers that we project in our current international energy outlook.

Dan, members of the panel, thank you very much, ladies and gentlemen, for your attention this morning.

[Applause]

**Dan Yergin:** Thank you very much Guy, for that very broad view. And also as Guy expressed appreciation to Bob and Frank and Lisa, I'd like to do it on behalf of the whole conference, for giving us this opportunity for this dialogue today.

Guy, 40 million barrels a day increase in demand over 20 years is a pretty bracing number. That's really a 50 percent increase in demand. I think our next speaker will have a point of view on that subject.

Abdallah Jum'ah is President and CEO of Saudi Aramco, has a very wide range of responsibilities for a company really that produces ten percent of the world's oil currently, has about 13

percent of the world's oil production capacity.

Mr. Jum'ah has a distinguished career in Saudi Aramco across the entire range of the company's operations. He's been a member of the Board of Saudi Aramco since 1994. In the first part of the 1990s he was Executive Vice President in charge of International Operations; and in 1995 became President and CEO. So we look forward very much to your perspective on these questions.

**Abdallah S. Jum'ah:** Thank you, Don.

Distinguished guests, ladies and gentlemen, good morning still.

I would like to commend CSIS and the U.S. Saudi Arabia Business Council for convening this discussion for oil resources and the security and stability of the world oil market. Today's discussion is particularly timely because forecasts of energy supply and demand are attracting heightened interest, compounded by a growing sense of unease regarding oil reserves and the sustainability of oil supplies.

My remarks will center primarily on Saudi Aramco and the role we envision ourselves playing in the future supply of oil. I will focus on five areas that I believe are relevant to today's discussion. They include our reserves, future production potential, reservoir management strategies, the key enablers that underpin our reliability, and finally, the multi-dimensional relationship that has existed between Saudi Aramco and the range of U.S. institutions for more than half a century.

I would like to preface my remarks by reiterating a key point made by His Excellence al-Naimi this morning. He noted that despite the gloom and doom the world in fact has plenty of oil and that we need not be concerned about a shortage of supply for a long time to come.

The worries about resource adequacy expressed by some analysts remind me in many ways of the book, "The Limits of Growth", published in 1972 by the Club of Rome. You may recall that this book ignited a serious debate concerning the imminent exhaustion of natural resources including petroleum. Despite the doomsday scenario outlined in the book the world's oil reserves have in fact continued to grow over the last three decades, despite healthy consumption, and indeed are presently at the highest level the world has ever seen.

Recently some questions have been raised regarding the crude oil reserves managed by Saudi Aramco. Although this topic has

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been thoroughly addressed by our technical and professional staff in various forums including the session held at the CSIS last February, I would like to briefly touch on this issue.

Saudi Aramco's proven oil reserves -- and mind you the Minister was talking Saudi Arabia and I'll be talking Saudi Aramco, so if you see a difference between the figures he has mentioned and the figures I'm mentioning it's this distinction. I'm talking about the company, he's talking about the total country.

Saudi Aramco's proven oil reserves currently total 260 billion barrels. That's with a B. They are contained in 85 fields and are spread across over 320 different reservoirs. To date only 23 of these fields have been developed and even these fields still contain roughly half of our current reserves. The other half of course is contained in undeveloped fields and there are 62 of them.

Saudi Aramco's estimates of its proved reserves are conservative by industry standards since we utilize cautious assumptions in their computation. Particularly our estimates do not include potential contributions from proven enhanced oil recovery processes. In addition, our reserves replacement program has been highly successful, and for the past several decades we have been able to make healthy additions for at least to fully replace our production.

These reserve additions have been achieved through exploration, delineation, the improved performance of production fields. Our initial efforts have naturally focused on developing a better understanding for our existing reservoirs and we have utilized extensive reservoir petrophysical, geologic, geophysical and field performance data in an integrated manner. The result of these efforts have been large increases in the proved reserves of our existing fields.

Given our large oil reserve base we have been focusing our exploration efforts in the last decade primarily on natural gas, and these efforts have yielded rich dividends. The company's oil exploration activities have been kept at a more moderate level but have still resulted in a number of discoveries.

Our oil exploration efforts will be appropriately accelerated in the future, and this leads me to a brief discussion of the future growth in oil reserves.

Based on exploration data acquired across the Kingdom and various regional studies we estimate that more than half of Saudi

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Arabia's potential hydrocarbon-bearing areas are still relatively unexplored. These areas include the central and western parts of the [Robal Kali], the empty quarter in the south; vast areas in the northwest of the country; and the Saudi Arabian portion of the Red Sea.

Extrapolating from available data we expect to find between 80 to 100 billion barrels of recoverable reserves in these areas not including additional recoveries expected from our known fields.

The USGS published their estimates for the world for the year, up to the year 2005 and the mean value estimated by the USGS in the year 2000 for that time that we would be finding some 87 billion barrels of recoverable reserves. Therefore our estimate of future oil reserves could well reach in the range of 340 or 360 billion barrels. And based on our current production rate that translate into a resource to production ratio of more than 110 years, meaning we have the ability to raise our production capacity to much higher levels if required.

This raises the issue of Saudi Aramco's production capability. Saudi Aramco's current production capacity is 10 million barrels per day, and that includes of course two million barrels of surplus production capability. This capacity has been tested and put into effect as required, and depending on global market demand we can produce and sustain the 10 billion barrels a day level for more than 50 years by relying primarily on our already proved reserves. Further reserve expansion efforts will certainly push the plateau beyond the 50 years.

There was a question this morning about how soon we can bring that additional capacity and I must tell you that we have always committed to bring the capacity in 90 days. We say 10 million barrels in 90 days. During the Iraqi war we were able to bring 9.6 in 24 hours; and we were able to bring the 10 million barrels in 72 hours.

We have developed a range of long-term crude development scenarios that call for raising the production to 12 or 15 million barrels per day depending on demand growth. We are confident that we can develop and sustain at these levels for at least the next half century by utilizing a higher proportion of Saudi Aramco's existing probable and possible reserves.

Potential also exists for extending the 50 year horizon for these higher production levels by further expanding reserves. Such expansion will come from a combination of oil focused exploration that leverages Saudi Arabia's rich hydrocarbon

potential; the prudent use of technology; well conceived reservoir management practices; and incremental oil recoveries through the application of enhanced recovery processes.

Naturally we will make capital commitments to expand capacity when market conditions warrant, but we have no doubt whatsoever regarding our ability to deliver extra production should the need arise.

This confidence in our ability to sustain our production over the long term stems from the quality and quantity of our reserves data and from our prudent reservoir management practices. I'll return to the crucial reservoir management practices later.

Although many of our large oil fields have been producing for decades they are still not mature by industry norms. In fact the overall state of depletion of Saudi Aramco's developed fields is only some 28 percent, significantly lower than the 60 percent level that typically defines maturity.

We deplete our fields very gradually in order to maximize our ultimate recovery. The average annual depletion rate of our fields is in the range of just two percent compared to an industry average of between four and ten percent.

An example is our [Sheiba] field in the empty quarter in Saudi Arabia. This is one of our medium-sized fields. The current reserves of the fields as of now, after five years of production is 18 billion barrels. The 18 billion barrels is higher than the combined worldwide reserves of any other company in the world, international oil company in the world. When we designed the facilities for our [Sheiba] field we designed them for a depletion rate of one percent per annum, and actually we have been producing the field now for five years and we have depleted that field at five percent.

We are also putting probably the largest increment the oil industry has ever seen to be brought at one time in the same place and that is the development of the two fields of Qatif and Abu Sa'Fah. This is a development of 800,000 barrels per day and we have designed that increment to deplete at two percent per annum.

Saudi Aramco's reservoir management philosophy was addressed in some detail at the CSIS meeting held in February, but I believe it's important to reiterate that approach.

Our reservoir management principles distinguish us from

operations elsewhere and reflect the custodianship that comes from managing the largest fields on the planet -- fields whose reserves play a vital role in ensuring the continued health of the global economy.

I should point out that in terms of size these fields are a class of their own. These are not your normal well fields. These are just totally a class of their own.

Our philosophy is based on five key principles that govern the management, production, and depletion of our reservoirs.

First, we seek to maximize the ultimate recovery of hydrocarbons. Naturally we look at economics, but optimized recovery is never taken lightly.

Our second principle is reservoir monitoring. We recognize that in order to maximize recovery we must give special attention to reservoir monitoring, particularly surveillance techniques, using observation wells and state of the art technologies.

Our third principle that again sets us apart from common industry practice is gradual depletion. As I noted earlier, we produce our reservoirs at much lower depletion rates than most other producers.

Fourth, we place significant emphasis on advanced diagnostics. Our intensive computational efforts involving detailed reservoir modeling allowing us to develop a much clearer understanding of future reservoir behavior, both aerially and vertically and at the level of a fairly fine grid.

Fifth and finally, we employ appropriate technologies across our operations which is almost a philosophy in itself. Advanced technology produces continued improvements infield performance and leads to learning models of how to best produce our reservoirs.

By producing our fields slowly we extend their life cycle. When we extend the life cycle we increase the benefits of the new technologies, improved diagnostics, better approaches to managing reservoirs, and smarter ways of navigating uncertainties. All these improvements lead to higher ultimate recoveries and their attendant business benefits including long term market security.

Taking a long term view of our operations is essential in our approach. The long term nature of the oil business applies to most activities within our industry, but it is particularly pronounced in the upstream that's the exploration and production

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segment. Unfortunately, the short term results that financial markets typically desire can undermine some companies' ability to adapt a long-term view.

At Saudi Aramco we are fortunate in that we are not subject to undue pressure for short term results. This does not mean that we place any less emphasis on economic efficiency, but rather enables us to better balance our short and long term priorities. In fact this dynamic has allowed us to maintain a much higher reserve to production ratio than is typical for our industry.

Historically when seeking to balance our outlays between exploration and development, we have given priority to those exploration investments that yield the greatest dividend over the long term. Our costs for finding, developing, and producing additional quantities of oil are among the lowest in the industry. The vast petroleum fields and reservoirs, our low depletion rates and our high reserves to production ratio provides us with some essential long-term flexibility while also enabling us to respond effectively to high demand growth scenario. This in turn enhances the security and stability of the market which is in everybody's interest.

But what are the factors that contribute to Saudi Aramco's strategic capabilities and operational performance and how do you utilize them to maintain our record of liability?

There are many different components in our operations, of course, but ultimately we rely on a combination of appropriate technology, well trained and highly motivated people, a strong financial position, and a fully integrated network of operational facilities.

Undoubtedly the development, acquisition and appropriate application of advanced technology has been a key enabler. In fact behind most significant advances in exploration and production activities has been corresponding advances in technology.

To give you an example of our emphasis on technology, more than 20 years ago we established an Exploration and Petroleum Engineering Center of Excellence at our headquarters in Dhahran. Today the center is one of the largest of its kind in the world, drawing upon roughly four times as much data as NASA handles. We continue to vigorously pursue the development and implementation of cutting edge technologies including enhanced imaging and modeling of reservoirs to better understand reservoir dynamics, improve monitoring and tracking and other advanced exploration tools.

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We do not view technology as a panacea and it cannot be applied indiscriminately without analyzing its costs and benefits. However, we are confident that continued technological advances and their appropriate application will enable us to discover additional resources and to extract more incremental oil from our known reservoirs.

By any measure, investment in technology will be an essential part of assuring abundant and reliable supplies of oil far into the future.

People are important in any business. A world class management team, a strong cadre of capable professionals, and well trained operating and maintenance personnel are the hallmarks of any top notch oil company and Saudi Aramco is at the forefront.

We take great pride in our work force made up of some of the best and brightest the Kingdom and indeed the whole world has to offer. Our multi-cultural work force brings together employees from over 50 countries and from a wide range of professional and technical disciplines.

To ensure that they have the skills and savvy to stay on top we maintain one of the largest corporate training programs in the world. Just one measure of our continued investment in our people. In fact our training program provides ten million training hours per annum to our employees.

Our robust financial position is another important aspect of our success. Saudi Aramco carries little debt on its balance sheet as our core oil production activities have been funded traditionally through internally generated income. The company's sound financial condition, it's substantial borrowing capacity if required, puts us in a strong position to fund capacity expansions when warranted by market demand.

Our well integrated network of facilities is another important contributor to our reliability. These facilities are designed with multiple backup systems and are configured to facilitate future expansion. We pay tremendous attention to safety and security throughout our operations.

I just want to comment also to add to what His Excellency the Minister spoke about this morning about physical security of our facilities. We have always had, it has nothing to do with terrorism or September 11 or anything. Ever since we built our facilities we have been providing our own, so I have 5,000

security guards hired by the company and we have always had that. That is beside, of course, government security. Our facilities are protected with cutting-edge technology in terms of surveillance, cameras, all sorts of detection. Our access to our facilities is restricted. In the off-shore we have helicopter surveillance of our areas. We have patrol boats. We have all sorts of surveillance that we have. So in terms of physical security, I will say it here, and I'm very confident, that absolutely there is nowhere in the world that oil facilities are protected as they are in Saudi Arabia and at Saudi Aramco.

To better meet the needs of our customers we operate a large owned fleet of super tankers able to supply crude oil on a delivery basis where desired. Summarily, we maintain operational storage in both the Caribbean and Western Europe, enabling us to better serve our key markets and customers. The company's massive crude oil pipeline system connecting Saudi Arabia's east and west coast also enhances our operational flexibility and reliability. The system can transport some five million barrels of crude oil per day -- fully one-half of our current crude oil production capacity, to our Red Sea shipping terminals.

The combination of these factors has enabled us to maintain our reputation as a reliable supplier of energy to the world. Despite our long history we have never suffered a supply disruption related to our operations. Similarly there has never been an operational situation in which we were unable to meet a supply commitment to one of our customers worldwide.

We know that our ability to provide a reliable supply of energy is vital to the world, to its countries, its companies and its consumers, and we take our responsibility very very very seriously.

This reliability has been tested repeatedly. We have been called upon a number of times including in recent years to rapidly respond to market needs and each time we successfully delivered on our commitments.

When regional political upheavals, domestic civil unrest or operational problems choked off crude oil supplies from major producers, Saudi Aramco stepped up its efforts to make up the difference. The same was true last year. When crude markets were roiled by the conflict in Iraq, our ability to activate spare production and export capacity enabled us to calm market fears, to replace barrels lost as a result of the hostilities, and to ensure a continued reliable supply of crude oil to meet the needs of our customers, particularly in the U.S..

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These actions underline the importance we attach to the relationship between Saudi Aramco and the United States, and not just in times of crisis. Saudi Aramco is the number one supplier of crude oil to the U.S. market and that fact is not about to change.

We view the United States as a favored destination for our crude and we have worked diligently to maintain our market share in this country.

Virtually all our super tankers are dedicated to bringing crude oil to the American market, providing tremendous operational flexibility and reliability. Our New York based marketing services subsidiary, Saudi Petroleum International, works closely with our American customers to anticipate their needs. Our Motiva refining and marketing joint venture in the United States, a partnership with Shell USA, provides refined products to consumers throughout the southern and eastern U.S.. This joint venture is now celebrating its 15th year of operations.

Our subsidiary offices in Houston and here in Washington also have a role to play in sustaining the vital Saudi Aramco business relationship. We consider this historical relationship to be very very special. The United States relies on us for a reliable supply of energy, but this is also a relationship of mutual dependence and of mutual benefit.

We look to the U.S. for training and human resource development opportunities for our people, for industry partnerships, for world-class engineering and oil field services, and for the precision made technologically advanced equipment necessary for our day-to-day operations in the Kingdom. In a very real sense our relationship with the U.S. companies, universities and institutions makes our job of providing energy to the world possible.

Roughly half of our professional employees and an even larger percentage of our senior management members are graduates of U.S. institutions of higher education. At this very moment some 450 students sponsored by the company are enrolled in university degree programs throughout this nation. By this time this number could have been twice this much. In the last two years we have had problems getting our students here, and therefore 350 students that could have been in the U.S. in addition to the 450 have gone to Tokyo, Japan; Seoul, Korea; Beijing, China; the UK; and Australia.

The lessons that these Saudi Aramco young men and women

learn, not only in the classroom but also in the local communities and from their fellow students, will stay with them a life time, further deepening the professional and personal relationships which our company shares with this country. The U.S. remains the destination of choice for many of our young students, and I hope that recent difficulties do not hamper their ability to pursue degrees at American colleges and universities.

It was Calvin Coolidge, the one-time resident of a white building just a few blocks from here who said that business of the American people is business. Here too Saudi Aramco has a role to play given the commerce we conduct with our American companies. That relationship begins with our crude oil operations. We rely on American technology and quality in many of the goods and services that we purchase internationally. American firms have played a key role in all our core oil and gas development programs including recent mega projects like the [Sheiba] field development, the [Halavan Hawia] gas plants, and the [Patifa Wusafa] development program currently underway.

I'll finish quickly. [Laughter]

They have been involved in front-end engineering, massive facility construction efforts, IT network installations and upgrades, ongoing oil field services. Since 2000 we have let contracts worth an average of an excess of \$1 billion a year with U.S. companies. We have benefitted greatly from the know-how and expertise of these American firms and they have benefitted greatly from our business.

Like their service industry counterparts, U.S. manufacturers are also vital to Saudi Aramco's operations. Our people out in the field rely on Caterpillar earth moving equipment; deep desert rack from Kenwood; and Baker Hughes drill bits. If you walk through our facilities you will find Dell and Sun work stations, Hewlett Packard printers, and Steel Case office furniture. Our company moves in Chevrolet sedans, Ford pickup trucks, Bell helicopters and Boeing jets. We take pride in our reputation for unmatched reliability and we in turn depend on the reliability of these and countless other products made in USA.

We work with some of the biggest names in the U.S. industry but we work with small and medium sized firms, either directly or as subcontractors, providing employment opportunities in communities from coast to coast. In fact more than 7,700 U.S. companies are registered as suppliers to Saudi Aramco.

Our purchasing and contracting activities represent a considerable economic benefit to those companies and to this

country.

In addition, given the strong presence of American-Saudi joint venture companies in the Kingdom, much of our domestic purchasing activity has an American component.

As most of you know, the American connection goes back to the earliest days of our company. Aramco was American owned and operated for some five decades, and why we are now a Saudi company and proud of the fact, the pioneering can-do spirit of those early days remain. We owe much to those early American contributions and we continue to value the relationship we have today with the U.S., its business sector, its educational institutions, and its people.

Our American employees share that sentiment. We have a number of third generation American Aramcons working our company, men and women whose grandparents were among those early pioneers and whose mothers and fathers continued to call the Kingdom home.

Over the last several years we have welcomed several groups of U.S. retirees back to the Kingdom to renew old acquaintances and to establish new bonds. We are proud to show them what we have accomplished since they left and pleased that we can maintain and indeed strengthen these friendships.

In all my conversations with these folks there is one thing that everyone agrees upon. Saudi Aramco's relationship with the U.S. is not only valuable to both us and to you, my American friends; it's also valuable to the world's economic health.

Ladies and gentlemen, Saudi Aramco has immense proven reserves of oil with substantial up-side potential. We are capable of expanding capacity to high levels rapidly and maintaining those levels for long periods of time at relatively low cost. Our cautious approach to managing our oil fields makes good sense, reflects our long term approach to our operations and stems from the special responsibility with which we have been entrusted by the global economy.

We will continue to leverage our natural, technological, human and financial resources to meet the world's expectations and to maintain our unmatched record of reliability as a supplier of energy.

Saudi Aramco is fully cognizant of its unique position in the global oil supply chain and we are well positioned and well prepared to play our part in assuring the continued security and stability of the world oil market.

Thank you for your attention.

[Applause]

**Dan Yergin:** Abdallah, thank you very much for that wide-ranging description of Saudi Aramco's scale of operations, its very dramatic scale of operations, and also for sharing those principles that guide the operations.

We now turn for a global perspective to Rex Tillerson who's president of ExxonMobil Corporation. Rex has had considerable experience first in North America, and knows very well the challenges of production and production growth in North America. He's had wide experience internationally. He was President of Exxon Yemen, and then subsequently was responsible for Exxon's activities both in Russia, the Caspian Sea, as well as Saklan Island.

In 2001 he became Senior Vice President of ExxonMobil and this past March, just last month, became President of ExxonMobil and a member of the Board of Directors.

Welcome, Rex.

[Applause]

**Rex W. Tillerson:** Thank you, Dan. It's always nice to be batting cleanup, but I think the speakers this morning have done a good job of loading the bases, as they say, for a fruitful discussion and I'm going to try to just add a few other perspectives to many of the things that have already been laid out. In particular some of the issues that exporting countries and importing countries need to consider in order to continue to create and maintain the proper conditions for this chain of supply to demand that has been discussed this morning and the stability that we've enjoyed around that.

I do welcome the occasion to focus attention again on the need for long term security and stability in the world oil market. I'm especially grateful and honored today to be joined today by Their Excellencies, Saudi Arabia's distinguished government and business leaders.

In my view the focus this morning on energy supply, security and stability is timely and essential. In the coming decades meeting the expected increase in global energy demand will require a broad portfolio of energy options and among those options hydrocarbon fuels as you've heard this morning are likely

to remain the primary energy source, certainly through the middle of this century.

A great writer once observed that most human beings have an almost infinite capacity for taking things for granted, and in many respects we in our industry are victims of our own history of success. The apparent ease with which peoples of the developed world and especially people of this country have their energy needs met day in and day out belies the significant risk and enormous challenges inherent to our business of finding, developing, transporting, refining, and distributing fuels and other products to the consumer.

In the oil business, though, we have never been a stranger to meeting such expectations. In fact successful oil companies remain competitive by not taking these things for granted including security and stability in the oil market.

Given the importance attached to this vital and far-reaching issue it is especially fitting that the U.S.-Saudi Business Council and the Center for Strategic and International Studies have joined in hosting these discussions. The U.S.-Saudi Business Council has helped further strengthen the relations between the people and governments of both countries.

I also want to express my thanks to the Center for Strategic and International Studies. In a very real sense CSIS scholars continue to set the standard for dispassionate, non-partisan and thoughtful analysis of the most important issues of our times. Such sober analysis and perspective are critically important to those responsible for developing sound public policy.

When the subject concerns energy and the global economy, the best policy choices often compete against the expedient, the politically different, and all too often the misinformed.

Saudi Minister of Foreign Affairs Prince Saud Al-Faisal recently offered his view that human development and economic prosperity are the keys to a better future in the Middle East. We agree. In fact as we see it, access to affordable and secure energy supplies is essential to the continued progress, prosperity and well being of all the world citizens.

The petroleum industry is a long-term business in which risk, investment decisions, and reward or failure are evaluated over years or even decades, yet despite this, or as some would have it, because of this. The oil market is remarkably responsive to the shifts and the balance of supply and demand.

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As you would expect at ExxonMobil we devote considerable time and attention to trying to understand these dynamics, and while we never lay claim to being able to predict the future we regularly conduct a comprehensive analysis of the oil and gas business and develop a planning framework based on what we see as the outlook for energy.

For our purposes this morning I'd just touch on a few highlights because others have said much about this already.

But first, as has been the case in the past, economic growth will remain the primary driver of future energy demand. The global economy has grown at an average rate of about three percent since 1970 and we expect growth to continue at that pace over the next two decades with reduced rates of population growth offset by increases in per capita productivity.

We also think that the energy demand will grow at a somewhat lower rate, reflecting significant but yet to be achieved advances in energy technology and efficiencies. We project that the world's demand for energy will reach close to 290 million oil equivalent barrels per day by the year 2020 or about 40 percent more than today.

The petroleum industry may need to add about 100 million oil equivalent barrels per day of new supply over the next decade to meet projected demand -- an amount almost 80 percent of today's production levels.

Such huge investments will intensify our need for new technology. Research and the commercialization of new technologies that expand resource capture capabilities are critical, as are advances in production technology. Meeting the growing energy demand will require timely and essential resource development. We expect to see more oil coming from the Middle East as well as West Africa, Russia and the Caspian. We also expect to witness increasing interdependency between importing and exporting countries -- a shift brought about by the variation in demand growth rates and the continuing shift in supply sources.

For example, net oil imports into the United States and Europe are likely to grow by about three million barrels per day over the next two decades. While in Asia, net imports could increase five times that amount to 15 million barrels per day, representing a growing shift in the energy demand centroid from west to east.

These potential developments inevitably raise security

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concerns about long term oil supply. Import independence is not realistic in most cases nor is it necessary if supply risks are managed effectively. The answer to concerns about near term and long term access to petroleum resources is supply diversity. Governments can help through allowing access to resource potential acreage in all parts of the world. Government funded strategic energy reserves are appropriate as a safeguard in the event of a severe and sustained supply disruption. However, the use of strategic reserves as a tool for manipulating short term energy prices is unwise and it is contrary to the purposes for which such strategic reserves were created.

When allowed to work the free market is exceptionally efficient. As a means of communicating information between producers and consumers to the benefit of all.

A growing number of forward-looking governments around the world are embracing free enterprise economic policies and addressing their economic priorities with market solutions. Reducing or eliminating harmful economic barriers such as import tariffs, confiscatory tax schemes, quotas, price controls, and competitor restrictions are actions which further promote confidence in the market place.

Importing countries want to have confidence in stability of supply and predictability of terms from exporting countries. They can achieve this by creating reasonable regulatory regimes and by relying on competition and market solutions to meet future energy demand.

Resource rich host countries can encourage energy development by fostering an environment that gives access to new areas of hydrocarbon potential and encourages the long-term investments needed by our industry to find and develop new supplies for the United States as well as other consuming countries.

Such an environment is based on respect for the rule of law, a stable legal framework and predictable tax structure, commitment to the principles of sanctity of contract, an impartial court system, elimination of duties, and other fundamental safeguards that encourage business investment.

Where governments do not adopt or enforce a stable framework of laws and regulations investments become difficult if not impossible to justify.

Governments that take the lead in encouraging investment will reap the substantial benefits that accrue from it. Success

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will require collaborative effort and a cooperative relationship between exporting and importing countries.

Because major energy projects are often very expensive undertaking lasting for decades, establishing solid, long term relationships is essential for all parties involved.

ExxonMobil has worked hard to build and strengthen such relationships for more than a century and today we conduct business in more than 200 countries and territories. Our approach is straightforward. Invest in projects that take full advantage of our global capabilities and our cumulated experience in energy development as well as our substantial financial, technical, environmental and management expertise.

ExxonMobil's relationships in Saudi Arabia are a case in point. Our business ties with the Kingdom date back more than half a century -- a fruitful and mutually beneficial relationship that continues even now. Today we remain the Kingdom's largest foreign investor participating in multiple joint ventures and employing more than 3,000 Saudis. We're the largest purchaser of Saudi crude oil exports, accounting for nearly 10 percent of the Kingdom's total exports and making Saudi Arabia the largest single supplier of raw materials to ExxonMobil's worldwide refinery system.

Through the year we've established business relationships with various Saudi enterprises in upstream, refining, marketing, and petrochemical projects. These alliances have generated economic expansion, diversity of the industrial base, and increased employment opportunities for Saudi citizens.

Our long term commitment to Saudi Arabia includes energy investments that have contributed significantly to the growth of the local economy and help provide the necessary funding for the growth in the Kingdom's infrastructure.

Building on our current business ties the cooperation between Saudi Arabia and ExxonMobil will be as mutually beneficial in the future as it has been in the past. Put simply, our commitment to Saudi Arabia is genuine, robust, and long term.

Together with our partners in Saudi Arabia we look forward to strengthening our relationships and developing new ones as we focus on new opportunities to expand the Kingdom's energy infrastructure.

In our view Saudi Arabia possesses significant undeveloped oil and gas resources. Thus we should continue meaningful

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discussions to fully develop these resources to meet the world's energy needs and also help improve economic conditions for all Saudi citizens.

Finally, if I may, a word about the broader issue that brings us together today. The strong historical ties between the people of Saudi Arabia and the United States and the spirit of cooperation that binds our two governments in a common purposes remains a steady bulwark against the unsettling events of the stormy present.

If I may again quote Prince Saud Al-Faisal who said recently, "We must spare no effort in emphasizing the shared community of interest between the United States and Saudi Arabia in increasing the opportunities of common understanding and human contacts, and in identifying the numerous areas of cooperation that will allow us to view our future with optimism."

In echoing these sentiments I would also suggest that our longstanding business relationships in the Kingdom of Saudi Arabia are a good example of the possibilities and achievements yet to come.

Though a broad range of views exist concerning the future, one thing is clear. The strong link between economic growth and energy use shows that the world's economies will continue to need reliable and affordable energy supplies to sustain their growth. Safeguarding the security and stability of the world oil market must be more than a goal. It is an urgent task that demands our all.

In fulfilling this mission to provide those vital supplies the oil and gas industry will play a central role in helping to sustain economic growth. I have every confidence that together we'll be equal to that responsibility.

Thank you for your attention.

[Applause]

**Dan Yergin:** Thank you very much, Rex.

I know that Bob Ebel has a very thick wad of questions but I believe that the pressures of Chairman Greenspan's schedule means that those questions will have to be answered at another time, but I'll let Bob explain it.

**Bob Ebel:** Thank, you very much, Dan.

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Our luncheon speaker has arrived so we need to proceed in all due haste up the escalator one floor to the ballroom, and where he awaits our presence. Thank you.

[Luncheon Keynote Address]

**AFFORDABLE ENERGY, ECONOMIC GROWTH**  
**Challenges for Energy and the Global Economy**

27 April 2004

**Bob Ebel:** Thank you very much ladies and gentlemen for returning relatively promptly after lunch. I think again we're going to go with written questions. I'll make sure that if you want to submit a written question that you'll be provided with a card.

It's now my pleasure to turn this panel over to the good hands of Gary Peterson who will moderate this only panel this afternoon. Thank you.

**Eric Peterson:** Good afternoon, ladies and gentlemen. I'm Eric Peterson. I'm Senior Vice President and Director of the newly formed Global Strategy Institute at CSIS. It gives me great pleasure to moderate this discussion this afternoon on the broader issues associated with the challenges of energy and the global economy.

Our two speakers require no introduction so I'll be very short. I understand that the full description of their backgrounds is available to you. But I'd like to begin by introducing His Excellence Dr. Ibrahim Al-Assaf who is Minister of finance of the Kingdom of Saudi Arabia.

Dr. Al-Assaf was appointed Minister of Finance and National Economy in January 1995. From July 1995 until October of 1995 he served as the Vice Governor of the Saudi Arabia Monetary Agency. In October 1995 he was appointed Minister of State and a member of the Council of Ministers.

Dr. Al-Assaf earned a Bachelor's degree in economics and political science in 1971 from King Saud University in Riyadh. He received a Master's degree in economics from the University of Denver in 1976; a PhD in economics from Colorado State University.

In his capacity as Minister of Finance Dr. Al-Assaf serves as Chairman of the Board of the directors of a number of institutions including the Public Investment Fund, the Pension Fund, the Saudi Fund for Development, the Real Estate Department Fund, the Saudi Industrial Development Bank Fund, and the Saudi Arabian Agricultural Bank, among others. He also serves as Vice Chairman of the Supreme Economic Council's permanent committee and the higher committed, Preferred Minister of Reform.

These are only a few of the remarkable credentials that Minister Al-Assaf brings to the table. I hope you'll have a look at the full bio that we've made available to you, but it is now my pleasure to welcome him to this podium.

Mr. Minister?

[Applause]

**Ibrahim Al-Assaf:** Ladies and gentlemen, it's indeed an honor to address this distinguished assembly.

I would like first to thank the Center for Strategic and International Studies and the U.S.-Saudi Arabian Business Council for arranging this meeting.

I am confident that this occasion will help promote greater cooperation and deepen the special relationship between our two countries.

It's also indeed my pleasure to sure this session and the podium with my dear friend Jim Wolfensohn, and I would like to take this opportunity and in front of this distinguished gathering to thank him very much for his relentless efforts and energy to help developing countries including Arab countries and especially the Palestinian people in the West Bank and Gaza.

Ladies and gentlemen, I would start by reiterating the same points raised by previous speakers and emphasizing the longstanding and important relationship between the United States and Saudi Arabia that started with one commodity, oil, and developed to a comprehensive business relationship between our two countries.

This relationship obviously helped both sides. Of course Mr. Jum'ah mentioned some of the relationships as far as the oil industry but also in other areas as well. And it helped Saudi Arabia to develop its oil industry, develop also the private sector, and benefitted the business community.

Of course as I mentioned the beginning was with the oil and we invested the returns from the production in oil to the benefit of our people and to the development of our economy. And I would like to say that as our economy grows, so the opportunities for increasing investments and exports by U.S. firms also will develop. And it is from this perspective that the impact of the rise of oil prices in global economy should be viewed. Indeed the impact of higher oil prices in consuming countries could be partially or fully offset by the higher exports to oil producing

countries as well as increased investment opportunities.

Here it's worth noting that increasing oil prices over the past year should be viewed in the context of the broad based rally in commodities. Indeed, a number of commodities have risen at a much faster pace than oil. For example coal rose by more than 60 percent, while metals rose by more than 50 percent. It's also important to note that the rise in oil prices have been offset in part by the depreciation of the [inaudible].

That said, oil revenues fluctuations remain a major challenge. Sharp swings in oil prices are clearly harmful to economies of both the producers and consumers. Saudi Arabia therefore remains fully committed to making every effort to maintain stability in oil prices and I don't need to elaborate on this because Minister Naimi already eloquently addressed that.

To this end oil policy would remain focused at meeting our development needs while helping to ensure the supply of oil necessary for global prosperity.

Our success in reducing oil price swings will also require strengthening the dialogue between the producers and consumers, especially under the framework of the International Energy Forum which has a Secretariat in Riyadh.

Efforts to address the geopolitical uncertainties in the Middle East are also a priority. In addition, it's important to reduce the limits of refining capacity, and again this is something that has been discussed earlier, and discourage speculation in the oil market, especially by hedge funds.

Let me also add to this, and here I'm referring back to our discussions earlier this week in the International Monetary and Financial Committee of the IMF, where the discussion focused to some extent on the oil prices and their impact on the world economy. There one of my colleagues from one of the developed countries stressed the point that stability is good for both producers and consumers, and I intervened and I told him that I strongly agree with him, and because this is a stated position of my country. However I would like, and I plead with him and his colleagues from the major consuming countries to remember these words when the price of oil declines. Not only to remember it when the price of oil increases. I hope that will be the case. [Laughter]

But I also immediately followed that by saying I hope we will not see this in the near future. [Laughter]

As far as these fluctuations, one has to think that not only the OPEC countries and oil producers have to make the efforts, but I guess in these cases major consuming countries should think of their own policies and instruments that are available to them to address these higher prices, and here I have in mind looking back to the tax regimes on oil products.

As we know, the taxes and oil products and oil are very high and the crude component of that is really small. So even consuming countries have a way to mitigate the increase of oil prices and I hope this will be one element that they should be looking at.

I would like to also address one point from my perspective as a Finance Minister and also as a member of the Board of Saudi Aramco and the Supreme Petroleum and Mineral Council. Here while, and I want to address the issue of the excess capacity. Of course as a Finance Minister it's very challenging to see these investments in excess capacity, but again because of the points that were mentioned by Minister Naimi, this is a commitment by the government to invest in that capacity, even during the very difficult times in our fiscal situation. So we have proven that commitment during good as well as difficult times.

Another area, and again Abdallah Jum'ah addressed, but I wanted to allude to that from my perspective, is that unlike the other producing countries where they fell in the trap of perhaps treating their oil companies like any other entity, we are lucky in Saudi Arabia to treat our oil industry as a real business without the intervention by the government, and I'm sure Abdallah Jum'ah will remind me of this whenever he requests some funding for some of his projects if we hesitate to approve them, but I wanted to say it in front of this distinguished audience.

Going forward, the outlook for our economy is bright, for this year and over the medium term. We expect private investment and growth to gain momentum in view of the improved global economic outlook and the government's continued commitment to broaden microeconomic policies and structural reforms.

These good prospects should further enhance the opportunities for U.S. companies and we will continue to have a high priority for maintaining a stable and enabling microeconomic environment.

Monetary policy will remain focused on ensuring low inflation and nominal exchange rate stability vis-à-vis the U.S. dollar, and for the fiscal front we continue to aim at balancing the budget and improving the structure in order to place the debt ratio on a declining trend over the medium

term. To this end efforts are ongoing to improve the budget implementation and further strengthen the expenditure controls.

We will also continue to stress the cost recovery of government goods and services with regard to protecting the most vulnerable segments of our population.

On the revenue side we will persist in broadening the revenue base, improving the efficiency, and strengthening the administrative capacity. Besides maintaining macroeconomic prudence we have embarked on a second generation of reforms to accelerate growth and address the job needs for the rapidly growing population. Since the late 1990s the forecast of reform has been on institutional, legal and regulatory environment to help ensure an even friendlier environment for the private sector.

To this end a number of institutions were developed to better address economic issues, promote domestic and foreign investment, and develop the tourism sector.

Let me just quickly mention a few of these. The first one is the revised tax law where the tax has been reduced to 20 percent from its original rate of 45 percent, as well as having an indefinite loss carry forward for investors and also to have the tax law as a transparent one.

Another development is that of the capital market law as well as the insurance law, and we believe because of these developments and three major reforms we will have an exciting period ahead of us, especially in the financial sector.

Of course if we want to provide jobs for our growing population we need to get the right skills to do that and the government has been engaged over the last few years, but especially the last year, in implementing a number of comprehensive policies to address that including a decision to train 10,000 Saudis every year in special areas as well as opening 20 technical colleges for our students and more vocational training centers. I'm saying this to show how we are shifting more and more to providing the skills that the economy needs rather than the liberal arts and others that are low demand. We are moving with these areas. In addition to what I just mentioned we have now a human resource development fund that provides funding for training and whether they are individuals or institutions. And just very recently we have had a ministry dedicated to labor issues. We hope all these efforts will focus on the development of the skills needed for our economy.

Saudi Arabia continues also to be at the forefront -- this is another issue I would like to address and I'm sure

it will be something the audience would like to hear, addressing Saudi Arabia's at the forefront of dealing with international efforts to combat money laundering and financing terrorism. Here we have adopted a number of policies earlier on to prevent that. Many year ago actually we have that, and [Governor Siari] of course on top of that as far as the regulations to know your customer, to monitor and prosecute illegal transfer of money. We have adopted also a new law in money laundering and financing terrorism. This is one of the toughest in the world. In addition to that just recently we have decided to have one agency to be in charge of charities outside Saudi Arabia. No individual or institutions can transfer money to charities outside Saudi Arabia except through this agency.

No one is allowed to collect money in Saudi Arabia except after the approval of this agency and making sure that the money will go to the indicated charities outside and make sure that the governments of the recipient countries also are agreeable to the funding. Again this is something that I don't think there is any country in the world that has adopted such strong measures to cut the financing of terrorists.

I'm glad to say because of this we have received high marks from the [FAT] and we had a joint report on our policies to address financing of terrorism and the results of the evaluation were very positive on this. Again, Saudi Arabia was one of the first countries to move or to have these joint reports.

Let me for the sake of brevity stop here and I will be pleased to receive any questions that you have. But I just want to conclude by saying that the long relationship between our two countries have been mutually beneficial for the two peoples and two governments and I'm sure there are more benefits ahead with the development of Saudi Arabia and the involvement of the American private sector in that development.

Thank you very much.

[Applause]

**Eric Peterson:** Thank you, Mr. Minister.

Would you please hold your questions. As my colleague Bob Ebel indicated, we'll collect written questions at the end, so I'd ask you to write them down now and turn them in later.

It also gives me great pleasure to introduce someone who needs no introduction, James D. Wolfensohn who is simply

an icon on the global desktop.

Before becoming The World Bank Group's ninth President on June 1, 1995, he had already established a very significant career as an international investment banker with parallel involvement in development issues and the global environment.

September 27, 1999 he became the third President in World Bank history to be reappointed by the bank's Board of Executive Directors to a second five-year term.

We were talking briefly over lunch. It would be remarkable to look over Mr. Wolfensohn's tenure at how many miles he has traveled, even as his tenure as World Bank President. During that tenure he has traveled to at least 120 countries around the world looking at the various challenges facing the bank's 184 member states. And as part of those missions he has discussed a range of factors with governments, representatives from business, labor, media, non-governmental organizations, religious and women's groups, students and teachers, etc.. This last weekend I think it was his 17th semi-annual meeting of the World Bank refined [inaudible], and we're very very delighted to welcome him to this podium.

Mr. Wolfensohn?

[Applause]

**James Wolfensohn:** Thank you very much, Mr. Peterson, ladies and gentlemen, Ministers. Let me first of all acknowledge my joy of being on the platform with my friend Ibrahim Al-Assaf. He helped me very much in my early years. He was Dean of the Board of the Bank and as a result of everything I learned from him I got a second term. So I'm especially grateful to him and I should acknowledge that even our current Dean of the Board is from Saudi Arabia. It's another form of intervention in this country's activities and the world's activities which may be unnoticed by the rest of you, but at our Board we have a strong influence by Saudi Arabia and we're delighted to have that.

Secondly, I would like to say that having had a report on this morning's meetings and heard Alan speak at lunch and now heard Ibrahim speak, I wonder why I'm here. I'm sort of a footnote on the discussion of the future supply and demand statistics that Alan so ably covered at lunch. I really can't comment on prices of this commodity as we go forward, nor am I an expert on the relations between Saudi Arabia and the United States.

But I guess I can take a few minutes to maybe give a

dimension of the issue of energy as seen from those parts of the world that are not represented here. The five billion people in developing countries out of six billion people on the planet who, as you know, are consumers but far more modestly than the rich countries. Maybe one-fifth or one-sixth of world consumption, and a fraction on a per capita basis depending on how you measure it and depending on the countries between 1/15th and 1/20th per capita that in some cases are just off the charts in terms of no energy consumption at all in a number of the countries.

So why would the organizers have invited me along? I think it's because none of us can exist in a planet that is unstable, and none of us can foreshadow growth in the world without thinking about the growth in the development world. Whereas heretofore the demands of developing countries may not have been definitive or any sort of factor in the setting of prices, today this so clearly changing. We project that in the next 25 years our planet will grow from six to eight billion people, and all two billion save 50 million, will go to developing countries. So in the year 2025 we'll have a world of eight billion of which seven billion will be in developing countries. That alone is a signal of increase in demand for energy sources -- oil, gas, coal, and such other forms of energy as they may find.

Secondly, the balance is changing. As we look forward in our planet 50 years, we would expect that 40 percent of global GDP will be represented in developing countries.

So whatever be the position today, whatever has been our historic view of the demand for oil and the demand for energy, looking forward we seen an exponential growth and indeed in terms of economic growth we see at the moment twice the growth in developing countries that we see in developed countries. For that reason alone I guess it's worth thinking about the developing countries.

Then if you look at the two major countries, India and China, where China has 1.3 billion people and India a billion. Even in today's market you see the impact of these emerging giants in terms of their demand for energy. You only have to look at the Chinese demand for energy of which went up 50 percent in the last 18 months and which is projected to go up three times more over the next 20 years. My guess is that's a conservative estimate.

As we look forward to Chinese participation in global trade, today it runs around three percent of global trade with the U.S. around 13 percent. Our projections would lead us to believe that by the year 2017 they'll be equal -- 12 percent each. Showing this dramatic incline in China's participation in manufacture and in global trade. If you're going to manufacture or participate in global trade, it

stands to reason your demand for energy.

So the Chinese influence which today is seen in the coal markets particularly in terms of the pressure on cooking coal and coal for steel and also an increased demand for gas and for oil, it's clearly becoming a factor in terms of economics while at the same time we have 35 countries in developing countries which are now or potentially producers of oil.

We have in the projections which have been put out recently, we have an estimate that over the next 25 years, and the Ministers could probably confirm or deny this, but our estimates would lead us to think that as we look at the energy investments they will be on the order of \$16 trillion over that period of time, of which half will be in developing countries. So this in itself is a huge influence on developing countries and leads to other issues which I'll get into in a minute which are issues of equity, social justice, how the money's distributed, issues of corruption, issues of stability, all of which are on the agenda of civil society and the agenda of many people in the developing world.

But at the moment we start at a point where unlike Alan Greenspan's description at lunch where there can be modulations of the use of energy in response to costs, in the developing world, we start with something far less attractive that you may or may not appreciate. 1.6 billion people in the developing world have no access to electricity. 2.4 billion people cook with biomass. They go down and cut down trees and do whatever they can to try and cook. So for them the issue of oil prices is not an issue. The issue is whether they can have access to any form of power.

So for the countries that I represent the issue certainly is one of price which has a significant and direct impact on the ability of these countries to operate, but you have a deeper problem in terms of what the world has set as its goals, the so-called millennial goals, to halve poverty by 2015 and to improve the levels of education and improve the levels of health, all of which are significantly dependent on power. Even running schools, running hospitals, running efficient governments, putting in highways. All these things are relevant.

About three weeks ago when I was in Ghana I was in a remarkable little village or town that was producing shoes for the American market with craftsmen working at it. But they had only six hours of energy a day. They were begging me, saying please for God's sake do something about the energy supply. We can produce, but we have no energy. I could give you dozens of examples. That's just the most

recent. Where you have this enormous desire to participate in growth. This enormous innovative quality in the developing world which is absolutely arrested by the inability to have power.

So power in so many cases that I've seen becomes at the core of the issue of development. Power itself, and then the pricing of power.

So these two things are really central to the issue of development, and I would say without extending the argument too much, central to the issue of peace in a much broader sense than I think we've looked at it.

I personally do not believe that we can have a peaceful planet unless we have a planet that has greater equity and greater opportunity. We have 2.4 billion people today under the age of 24. We have 1.5 billion under the age of 15. In the next 25 years our planet grows by 2 billion which means that at least 2 billion will be born plus the people that died, the equivalent.

So we are looking forward to a planet which is more than 50 percent young and more than 50 percent in need of jobs. If you need jobs you need an environment in which jobs can flourish and you need power.

These are the issues that are on our mind in the Bank, plus one or two other which maybe we can get to in questions. But the issues of environment affect significantly the developing world. The issue of global warming, the issue of changes in weather patterns, impacts the developing world far more than it impacts the developed world.

The issue of corruption, how one deals with both the benefits and the joys of finding oil in an economy where you have great divisions of wealth and how you do it without having an impact which tears the country apart. There are many such countries, I'm sad to say, many such regions. I'm just back from the Niger Delta where this is obvious when you fly over in a helicopter or when you go into villages.

So for us in the Bank let me make concluding points. Firstly, we think the developing world is a world that you all need to be thinking about. It is the fastest growing part of the world. It is also a humanitarian and a challenge in relation so peace, and it's a challenge in relation to growth. A responsible oil and gas industry in relation to those developing countries cannot think just in terms of price, but needs to think in terms of equity needs to think in terms of justice, needs to think in terms of opportunity. Because an unequal world will not be a peaceful world and a non-peaceful world is not much good to the oil industry.

Thank you all very much.

[Applause]

**Eric Peterson:** Thank you, Mr. Wolfensohn.

We'd like to ask you now if anyone would like to ask a question from the floor. If you would, would you please raise your hand and identify yourself before you ask the question, and would you please indicate the speaker to whom you would like to address your question.

**Question:** Al Milican, affiliated with Washington Independent Writers. I wanted to ask President Wolfensohn, have the arts and culture including religion played the role they could and should play when it comes to affordable energy and economic growth?

**James Wolfensohn:** That's about a three-layered question, I think.

The first is that the arts and culture have played much less a role in terms of the view of the rich countries and the poor countries than they should. Too often development has been perceived as an economic issue without thinking in terms of cultures and in terms of history and in terms of religion.

What we've tried to do recently is to recognize that for development in any country to be effective and to be owned, you must start with a cultural base. So we've tried to do that.

It is within that context I guess that one makes the step to energy and to indicate how it can be used. I can think of just a few examples really of trying to deal with religious and cultural organizations about their historic view of forests which they want to protect which is a form of energy, water which is a form of hydro power, but I couldn't really say even to look smart that I have yet found a link between culture and searching for oil.

Where it comes in is, of course, in the use of land and the rights of indigenous people where as we've had in numerous cases investments that have thought to be put in places which had religious value or historical cultural value, and those are covered in the current extractive industries report which has just been put out where one is looking for a better partnership between oil producers and communities.

I think that is actually happening, but I really need

notice of giving you a longer treatise in response to that question.

**Eric Peterson:** Thank you, Mr. Wolfensohn.

We now have written questions and I'll try to do the best I can to decipher some of this handwriting.

First, for Minister Al-Assaf. The question is what is the situation in the Kingdom with respect to high unemployment rates, especially among the younger generation? And you mentioned the training and education response, but prospects for relatively rapid growth with respect to population in Saudi Arabia.

**Ibrahim Al-Assaf:** The unemployment rate, let me say first that we don't have sophisticated data on the unemployment. We are just starting to develop that database on that. But the indicators that the unemployment rate is close to nine percent actually in Saudi Arabia, and I mention the efforts of the government to address this area.

Obviously one of the most important elements in addressing that is to have a higher growth rate in the country in order to employ Saudis. The efforts I talked about, whether on the macroeconomic front or the structural reforms have the aim of reaching high and sustainable rate of growth.

Still oil dependent we have sometimes very high growth rates and sometimes negative growth rates. But generally they are not, those rates are not enough to address the increase and the population.

Over on the private sector in particular the growth while not very high but consistent, and it has been sustained over ten years average, about four percent.

This is, for another country maybe a good growth rate, but in Saudi Arabia still it doesn't -- We need higher than that, perhaps in the range of six to eight percent in order to meet the growth in the population and the entrance to the labor market.

**Question:** Mr. Wolfensohn we have a question for you. Considering the great significance of developing countries and increasing global energy consumption does the World Bank have a specific mandate to make sure that power production facilities and energy consuming equipment points towards reducing energy intensity as they are introduced to the billions of people in the developing world?

**James Wolfensohn:** The answer is that we have a very

large initiative on energy economy and energy use, because obviously if you can cut down the demand or the wastefulness you have a big addition that you can make.

So the answer to that question is yes. The other mandate that we are being asked to look at at the moment is sources of renewable energy which for some people in the audience may know there's been a major study recently which has suggested indeed that we get out of the oil business and get out of the coal business and focus on renewable energy which is the latest debate that is taking place. I think it's unlikely that we will withdraw, but it has to be put in the context of what is the mandate from our shareholders and I should observe that renewable energy is now two percent of global production of energy and maybe we can move it to three or four in the next years. But I think it's unlikely that these meetings will not take place 20 years from now because of the interventions of the World Bank. I would guess that oil and gas may still be important 20 or 30 years from now.

**Question:** Mr. Minister, the next question for you is, from a fiscal policy standpoint what barrel price has the Ministry used to project federal government revenue for Saudi Arabia?

Now that's a specific question but it raises the more general issue of planning with respect to oil and energy and I wanted to let you address that.

**Ibrahim Al-Assaf:** Let me address one issue probably more interesting. Jim talked about it. That's the interest of developing countries, and this is clearly, this is also something that Saudi Arabia is involved in over many years. Here I want to mention a few of the examples.

Starting from the '70s we have increased our share hold in the World Bank and the IMF in order to help financing developing countries including of course the financing of IDOT which is the arm of the World Bank group to help the least developed countries, but also provided facilities to the IMF to finance the needs of developing countries in the '70s and '80s. Saudi Arabia also is the major shareholder in a number of development institutions with the aim of helping these countries.

We have the Arab Bank for development Africa. Saudi Arabia owns about 22.5 percent of the shareholding of that bank. This bank's aim is to assist African countries, non-Arab African countries. We have the OPEC Fund which Saudi Arabia owns about 35 percent of the share hold. The Arab Fund for Social and Economic Development, the Islamic Development Bank. These are regional institutions all aiming

at helping those countries whether it is in the social infrastructure or sometimes in the areas related to energy.

So of course as a developing country itself Saudi Arabia has been helping these countries and I agree with Jim on their needs and of course aspirations.

On the question, shall I leave it to Minister Naimi? This issue is of course, we take them as they come. I've been the Ministry of Finance, and of course the end result is the most important to us, is the real money. It's not the price assumption that is used for the budget.

**Question:** Mr. Wolfensohn, several of the questions that we've received directed to you involve the extractive industries review issue. Many of them ask what the prospects are with respect to implementation of those recommendations at the bank. When is your report coming out and do you expect to announce a decision soon with respect to those recommendations?

**James Wolfensohn:** For those of you that are not familiar with the extractive industries report, this is a report that was commissioned by us and done independently on the impact of the extractive industries globally and in particular in developing countries. It was chaired by Dr. Salim who recently, Emiel Salim from Indonesia who recently came in with a report which addresses issues that relate to the rights of people throughout the world, issues of environment, issues of renewables, issues of our interest in coal and oil, and makes quite a number of recommendations also in relation to the share of profits that may be forthcoming and the interest of communities.

I believe that in terms of direction there's not a lot of difference between the way in which we look at the issues and the way that Dr. Salim does. He points to a number of very important subjects. But the report that was done by Dr. Salim, important and focused as it is, probably needs us to consult a bit more with industry and with governments in relation to their view of this report. So I've explained to Dr. Salim that although we are very much in tune with many of his observations we want to spend the next month or two consulting with industry and with governments, and that somewhere around the middle of the year we'll present something to a committee of our board and then I'll meet with him again and after that we'll come up with our answer.

So I would guess you're looking at a June/July date for something definitive. In the meantime the dialogue is going on I would say constructively.

**Eric Peterson:** Thank you. Our last question for

Minister Al-Assaf. To finance the \$1 billion plus of investment needed for electric power and water desalination sectors, will Saudi Arabia give sovereign guarantees for both monthly payments and termination fees to IBPIWPP investors?

**Ibrahim Al-Assaf:** I don't think it's only one billion, I think the requirement is much higher --

**Eric Peterson:** Sorry, 100, I misspoke.

**Ibrahim Al-Assaf:** Yes, 100 is closer to the estimate.

The government is willing to provide the right incentives provided that also the offers from those companies are attractive as far as the cost of water and electricity and these issues are being finalized, actually, the issue of guarantees being finalized these days with our colleagues in the Ministry of Power and Electricity. In the very near future you will be seeing the final decision as far as how far we will go on the guarantees.

**Eric Peterson:** Thank you.

With that I'd like to thank both our distinguished speakers. Ladies and gentlemen, please join me in thanking Minister Al-Assaf and Jim Wolfensohn.

[Applause]

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**Closing Remarks**

**27 April 2004**

**Voice:** Good afternoon ladies and gentlemen. Two years ago the first American Saudi Petroleum Conference took place here in Washington, D.C.. It was a clear success. Today we have the second one, which is also a great achievement. We in the Ministry of Petroleum and Mineral resources have great esteem and appreciation for CSIS and the U.S.-Saudi Business Council for organizing this timely conference.

Our common goal is to create better understanding and beneficial relationship between our two countries. We truly need each other and complement each other in many ways. Without clear and open dialogue and transparency a guard could easily grow between us, a situation which would benefit nobody.

American-Saudi relations are multi-faceted and include [inaudible], military and security cooperation and coordination, and commercial benefits. Petroleum is an important part of commercial relationships.

Saudi Arabia has one of the fourth largest oil reserves, while U.S. consumes approximately one-fourth of the world annual production. Saudi Arabia is the largest exporter for oil and the U.S. is the largest importer. Saudi Arabia's largest sources of oil needs and the U.S. the largest market for Saudi Arabian oil. We truly need each other and we truly complement each other.

Yet our petroleum relationship and global oil market in general is one of the most misunderstood sectors of the world economy and economic relationship. We have to be well informed to make the right decision and judgment. Today at this conference many points which were discussed give us great reason for optimism. I would like to mention some of them.

First, there is enough spare production capacity worldwide and mainly in Saudi Arabia to meet oil supply shortage and increased demand.

Second, there is enough global oil reserve especially in Saudi Arabia to meet the world's needs for many decades to come.

Third, oil price might swing highly in short term but the goal is to make stable market within acceptable band. The Middle East has been the most important source of oil for the last 50

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years and expect it to be so for the first half of this century.

Finally, we live in an independent world which applies to all commodities and products including oil. This should be received or seen as a healthy sign for a better world.

It seems that every 20 years or so some direction on the oil market industry become common themes. They are for only damages and benefit nobody. Our goal, whether producers, consumers or independent policy institutions like CSIS should be to clear facts and policies for more understanding and to make the right decisions. Major conferences like this is one which will no doubt make a major contribution to presenting facts and clarifying issues. Not only about many-sided U.S. petroleum and economic relations but also about international oil market and its future. They are important to all of us and to the world community. Without such understanding that cooperation achieve through conferences of this kind, our economy could be damaged.

Again, we are all grateful and thankful for CSIS and other people who have worked so hard to make this conference an outstanding success. We look forward to working together for third conference again to project more positive and more accurate picture of the world, the importance of the oil market and the subject of U.S.-Saudi relations.

Thank you very much.

[Applause]

**Bob Ebel:** What we have heard today clearly and forcibly reminds us that we live in an interdependent world. Whether producer or consumer, exporter or importer, we are all vulnerable to any event, any where, any time, that impacts on energy supply and demand.

But because we live in this interdependent world we must seek solutions to the problems that arise not in isolation, not in confrontation, rather we search for solutions that serve the interests of the majority, not the minority. And in this search it is my belief that we can most assuredly benefit from studying the past.

In the past we have at times questioned the ability of exporter nations to meet ever-increasing demands placed upon them. The media, and bless their headline seeking hearts, find it far easier to report that the sky is falling rather than to inform the general public that despite what you may have heard, despite what you may have read, things are really not going so

badly after all.

Fortunately past predictions of supplier inability to meet their responsibilities for whatever the reason have proven inaccurate over time. I would point out that the United States is not immune in all of this. I need only require that the President of the United States addressed our nation about 26 years ago in which he declared the moral equivalent of war, and I'm sure some of you remember that fireside chat. In response to the problems that he had laid out. What were those problems? Let me quote them for you.

"The oil and gas that we rely on for 75 percent of our energy are simply running out. Each new inventory of world oil supplies has been more disturbing than the past. World oil production can probably keep going up for another six to eight years, but sometime in the 1980s it can't go up any more. Demand will overtake production. We have no choice about that." The President of the United States speaking.

Today we have the opportunity to be wrong once again. As we pose the very simple question, it's a question which is really one size fits all. Is it sustainable? Is what sustainable? Is Russian oil production and export growth sustainable? Is Iraqi oil production and export growth sustainable? Is Chinese oil demand sustainable? Are Saudi oil exports sustainable, let alone expandable? Unrest in Nigeria and Venezuela and oil reserve write-downs, an energy policy debate in Washington that seems unlikely to end in any meaningful actions either on the supply or demand side. They all come together to complicate the picture for us and add to our concern.

But I take comfort in the past and judge that the sky is not falling, that the benefits are accruing from recognition that we do live in one world in terms of energy, but especially of oil. We'll overcome whatever obstacles we may face along the way.

So in closing, I want to thank the Saudi-U.S. Business Council for all its support in making this conference the success that I believe it has achieved.

Let me say on behalf of CSIS that it was our privilege to act as co-host with the Council. And I would be remiss in not noting the efforts of two CSIS individuals -- Frank Verrastro who directs our energy program, and Lisa Highland who is our energy program coordinator. These individuals put in countless hours to ensure that today set a high water mark as far as energy conferences go.

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Finally, let me thank you, the audience, for your attention, for your insightful questions, for your presence here today.

Now this conference is now closed. Thank you.

[Applause]

(END)