

# NATIONAL COUNCIL ON U.S.-ARAB RELATIONS

## 17<sup>TH</sup> ANNUAL ARAB-U.S. POLICYMAKERS CONFERENCE

### ***“TRANSITIONING THE WHITE HOUSE: CHALLENGES AND OPPORTUNITIES FOR ARAB-U.S. RELATIONS”***

THURSDAY, OCTOBER 30, 2008

RONALD REAGAN BUILDING & INTERNATIONAL TRADE CENTER  
WASHINGTON, D.C.

#### **3:30-5:15: "ENERGY"**

**Chair: Ms. Karen Harbert** – Executive Vice President and Managing Director, Institute for 21st Century Energy, U.S. Chamber of Commerce; former Assistant Secretary for Policy and International Affairs, U.S. Department of Energy.

**Speakers: Ms. Nabilah Al-Tunisi** – Director of the Saudi Aramco-Dow Chemical joint venture project to build one of the largest hydrocarbon and chemical complexes in the world near the R’as Tanura Refinery in Saudi Arabia.

**Mr. Ryan M. Lance** – President, Exploration and Production – Europe, Asia, Africa, and the Middle East, for ConocoPhillips. He serves on the boards of both the American Petroleum Institute and the Independent Petroleum Association of America, is an advisory board member of Montana Tech and a member of the Society of Petroleum Engineers.

**Mr. Jay R. Pryor** - Vice-President for Corporate Business Development, Chevron Corporation. Mr. Pryor is responsible for identifying and developing new, large-scale business opportunities throughout the world. He assumed his current position in 2006 but began his career with Chevron in 1979. Since that time he has held a succession of management positions with increasing responsibilities in Asia, the United States, Europe and the former Soviet Union.

**Mr. James Burkhard** – Managing Director, Cambridge Energy Research Associates [CERA], Global Oil Group; leads the team of CERA experts focused on exploration and production strategy, upstream technology, and short- and long-term analysis of crude oil and refined products markets; coauthor of CERA’s *World Oil Watch*, which analyzes short- to medium-term developments in the oil market.

*Transcript by Ryan & Associates*

[DR. JOHN DUKE ANTHONY] Ladies and gentleman, we have a session that is as apropos and timely and relevant as any of those we've had thus far. Some may think even more relevant given the economic aspect of it, given some of the policy contraversialities, given what both nominees for President have said or not said about it, and what many people pushing this or that policy have persuaded Americans to conclude the United States ought to do, should've done all along, and should put a kind of a Manhattan crisis degree of seriousness to America's energy situation, and its challenges and opportunities, particularly so between the United States and the Arab world producers.

We have the Honorable Karen Harbert to chair this session. She is the Vice President and Managing Director of the U.S. Chamber of Commerce's energy project, which is a bold new innovative, strategic, visionary project. And immediately before that was the Assistant Secretary of the Department of Energy International Affairs, and was a speaker at one of our Congressional briefing series, precisely on the questions of energy dependence, independence, or interdependence, this last spring. Karen Harbert.

[KAREN HARBERT] Thank you. It's really wonderful to be here. And congratulations on this and all of your previous work this year that has been so important to strengthening our relations.

I would completely agree with you, there really is no issue that brings U.S.-Arab relations into starker relief than energy. It really highlights the opportunities and challenges of our relationship. It reveals a complex interdependence. It embodies the risks and rewards of collaboration. But most importantly, I think it shows the importance of maintaining and sustaining a healthy relationship between the Arab world and the United States people.

My job as chair of this panel is to do a little bit of a scene setter on trying to help you understand the world in which these companies are navigating, the landscape which they are operating, which I will do and then we will have each of them speak, then we will try and answer your questions.

I encourage you to write really hard questions, because I won't have to answer them. But I will do my best to get answers for each of you.

First, what's happening in the world energy market? Demand for energy is going to go up by over 50 percent between now and 2030. Seventy percent of that demand is going to be in the developing world. Electricity demand is going to go up by 100 percent, and yet one and a half billion people don't have access to electricity.

So we have a very challenging demand forecast out there. How much money will it take to meet that demand? \$20 trillion to meet that growing demand. Is that capital going to be available, and will that capital be able to be invested? What's happening on the supply side? Well access to hydrocarbons around the world are becoming increasingly difficult to get to. They are either geologically difficult to get to, they're in geopolitically very difficult places, or some of them are in places that are increasingly hostile to foreign direct investment.

And we have new players on the market. The national oil companies are increasingly important. About 80 percent of the world's proven reserves are owned by national oil companies. We're seeing a significant rise in project costs around the world, whether it's steel, or cement, or labor, the big infrastructure projects that are going to be meeting our demand are getting more and more expensive, and that's a big drain on these companies capital budgets. And we're seeing a lack of qualified engineers and skilled labor. In the United States, 50 percent of the energy workforce could retire in the next 10 years. It's hard to get engineers. Are we, in the United States, are we in the Arab World investing enough in those qualified engineers to sustain the extraction, production, and delivery of hydrocarbons? And of course we're seeing resource nationalism. We're seeing countries that are manipulating their resources not to the benefit of the consuming nations. And in this country, we have a very, very difficult syndrome to deal with, it's "banana." Build absolutely nothing anywhere near anyone or anything. And so while demand is growing, we can't build anything. So that is going to be a big strain in our economy, and we have seen it in lots of infrastructure projects whether they be domestic or internationally financed.

Let's not forget we live in a global market. China has 30 million cars on the road today. They're going to have 300 million by 2025. India's demand for oil has gone up 6-fold over the last 10 years. So competition for resources is out there, and there are new markets and new opportunities for producing nations. So what is the demand picture look like? In North America, we see demand go up overall by about 11 percent. In the United States that could be anywhere from about 19 to 29 percent. In Asia, and in the non OECD, Asia's going to go up by over 100 percent. But what we don't talk about a lot is what the increase is going to be in the Middle East. The Middle East is going to consume 62 percent more oil in 30 years than it does today. There's a huge increase in the domestic demand in the Arab world for new hydrocarbons resources.

Where are those resources going to come from? Well, the call on OPEC oil is going to become more and more in the coming years. And certainly, where in the world are there resources heavily concentrated? Certainly in the Middle East. The Middle East owns or has, and is blessed with over half of the world's proven oil reserves. So the call on those reserves is going to grow and the importance of those reserves is only going to grow.

What's happening in the market in which these companies have to navigate every day. So it's not just enough to get them out of the ground and getting them to where they need to be, but they have to deal with the markets in which they operate and the prices in which, the market that dictates the prices.

We know economic growth around the world is driving non-U.S. demand. We're seeing demand in the United States fall right now. Last August demand was reduced and driving was reduced in this country by over 5 percent. And we now see the response from OPEC countries in reducing production. So we are living in a time of very volatile and fluctuations between changing demand and supply and they're very, very hard to predict. We're living in a time of a financial crisis, and so we don't know what that's going to do to demand and it is certainly calling into question the ability of countries and the ability of companies to make new investments and very large, very capital intensive long term energy projects. And of course we're living in a time when there are new players in the market. There are speculators, and we live in a time when the dollar is changing dramatically in value in very short time periods.

Back in July, there was a poll done of the American public by Bloomberg, CNN, and the LA Times and they asked has the recent rise in gas and oil prices caused you or your family any financial hardship. Seventy five percent of the American public said yes. And then they asked in a different survey well, of those 75 percent that are mad about this, what do you attribute it to? And they attributed it to not oil companies, which had been previously who they attributed the problem to, but to the international competition for oil and natural resources.

So that's not a very heartwarming feeling of the American public about what's happening internationally. And that's going to affect how we make decisions, and that's something I hope we get to today, about how we have to overcome that public sentiment. But really what's important that this panel really needs to think about is that we are having real economic impact from higher oil prices. And because of the financial crisis we're seeing falling demand that brings unprecedented financial volatility into our markets, and it makes these companies have very, very difficult decisions to make about where they put their investments and when they put their investments in the ground.

We're dealing with an American public that is mad and we're dealing with two Senators running for President that both believe energy is one of the biggest economic security and national security challenges of our lifetime, and will do something about it in their administration.

So it's very unpredictable and I look forward to hearing from our companies about how they're going to navigate these waters, and how the relationships that we had with the Arab world will only be that much more important in the years to come.

Let me first turn to the first panelist on my left. We are very pleased to have Nabilah Al-Tunisi with us. She's the director of the Saudi-Aramco joint venture with Dow Chemical to build one of the largest hydrocarbon and chemical complexes in the world. It's going to involve \$25 billion of investment and it will be the largest petrochemical complex every undertaken in recent history. Prior to that she has had a very long and distinguished career in Saudi Aramco and I will not go through her entire bio because we could be here for the duration of the panel, but it is in all of your information. But suffice to say that we are so delighted that she also studied here in the United States at the University of Portland in Oregon, and also at Oregon State University and at Stanford. So she has great experience on the left coast of the United States and a very distinguished career and we look forward to hearing from her.

[NABILAH AL-TUNISI] Thank you so much. Madam Chairperson, Distinguished delegates and colleagues, it's an honor to be with you today and to address this important converse.

Energy is an essential driver of the world's economic health and social well-being. And in some shape or form energy touches the daily life of all of us. It's also a topic of immense professional interest and personal pride to me. And over the past 25 years a touchstone for policymakers and commentators associated with the National Council on U.S. Arab Relations.

Energy has been an integral element in the relationship between the United States and the Kingdom of Saudi Arabia for the last three quarters of a century. This year, in fact, Saudi

Aramco is celebrating the 75th anniversary of signing the original concession agreement between the Saudi government and the Standard Oil Company of California, predecessor of today's Chevron, which opened the Kingdom to oil exploration and marked the birth of our company. It took five more years of hard work in difficult conditions before oil was found in commercial quantities.

The discovery of Damman number 7, the "prosperity well," in 1938, opened the door of opportunities for the people of Saudi Arabia and also marked the debut on the global stage of what would become the world's largest and most reliable petroleum sector. Even as well 7 brought in, something else just as valuable was being forged; a unique sense of partnership between individual Americans and Saudis which would open the close relationship between our two nations.

Too often though, the energy relationship between the U.S. and Saudi Arabia is seen as a one-way street. Basically, Saudi petroleum bound for this country's shores. The reality is much richer and more complex. Certainly, Saudi Aramco remains a major supplier of crude oil to the American market, something we take great pride in and toward which we feel an enormous sense of responsibility. And yet, our company also relies on the United States for its continued business success, on high quality goods and materials used throughout our operations on world class engineering project management and oil field services, on training and educational opportunities including academic programs at some of this country's finest universities, and of course on the thousands of American men and women with Saudi Aramco's workforce in the U.S., back in the Kingdom, and in locations all over the world.

In addition, joint venture partnerships are yet another important aspect of our bilateral energy relationship. These include an existing in Kingdom refinery that we own and operate in conjunction with ExxonMobil as well as a project to build a major new export oriented refinery which we are pursuing with Conoco-Phillips. Actually, our U.S. partnership can be found as far afield as China, where we are partnering with ExxonMobil and China's Sinopec to expand an existing refinery and construct integrated petrochemical facilities.

Here in the United States, there is our Motiva refining and distribution partnership with Shell, which boasts three major refineries and includes nearly seven thousand and seven hundred Shell branded service stations in the Southern and Eastern United States. We are currently working with our partners at Shell to expand Motiva's Port Arthur, Texas refinery in a project which will mark or make the facility the largest single refinery in the country.

And today, I am pleased to have the opportunity to discuss yet another landmark partnership between Saudi Aramco and a leading American petrochemical company, the Dow Chemical Company. This is the Ras Tanura Integrated Petrochemical Project, or RTIP. One of the most ambitious downstream petroleum and petrochemical projects ever undertaken.

It will be a major addition to Saudi-Aramco's operational portfolio and the Kingdom's economy. The Ras Tanura Integrated Petrochemical Project takes megaproject into a new level. Some even call it a "gigaproject."

Whatever term you choose to you, RTIP is a giant step forward in the Kingdom's use of its hydrocarbon resources and its ability to add value to those God-given petroleum assets. Once complete, RTIP will not only produce a stream of refined products and petrochemicals, but will also form the hub of an industrial cluster. This cluster is a little thing of manufacturing and industrial companies that will transform the RTIP product stream into a wide range of essential material and useful consumer products. This industrial cluster will increase the value of our petroleum production while creating good jobs and extending the process of economic diversification already underway in the Kingdom.

Let me begin my overview by noting that RTIP is at the core of the company's strategy of capturing a greater share of the hydrocarbon value chain from its petroleum resources through investment and petrochemical assets. Those of you who did well in college chemistry will appreciate the product mix of this project; polyethylene, ethylene oxide, propylene oxide, and glycol, vinylchloride monomer, polyurethane components, epoxy resin, polycarbonates, amines, and glycol ethers. Those without chemical engineering degree might simply look at it as cracking open a single egg and using its content to create a chef's surprise of almost unlimited recipes and dishes.

Of course, contemporary life is pretty much unimaginable without petrochemicals and the wide variety of products which are derived from them. Because of the hydrocarbon chain it's so versatile it can be transformed into a wide array of everyday products such as plastics, clothing, packaging, CDs, automotive parts, medicine, fertilizer, eyeglasses, furniture, fillings, and the list goes on and on.

RTIP will help to meet growing global demand for these industrial and consumer products. Growth, which is particularly strong in developing economies whose populations aspire to higher standard of living.

To be sure RTIP is an ambitious undertaking. The project will cost tens of billions of dollars and will require millions of man-hours of engineering and construction to develop, and once complete, it will occupy a site equal to a small city.

Its planned production capacity will place it in the very top tier of such complexes. RTIP's location in the industrial corridor between Saudi Aramco's Ras Tanura refinery and its [?] gas plant on the coast of Saudi Arabia's Eastern Province, enables us to take advantage of a stable supply of feedstock.

When combined, these three plans, the refinery, the gas processing plant, and the new integrated project will surely form the largest single hydrocarbon and petrochemical complex in the world, with easy access to available export facilities and a skilled workforce. As I noted earlier, RTIP will be integrated with nearby private sector conversion industries, to room the new petrochemical feedstock will be supplied. A value park will be developed adjacent to RTIP's site. This will group manufacturing and service companies in keeping with the Kingdom's industrial cluster development program. By sharing infrastructure such as pipeline, transportation, distribution points, and service access, and so on. The value park will promote more efficiencies and economies of scale, while fostering new investment in private sector

commercial enterprises. Together, the RTIP project, the value park and the support services are expected to provide over 25,000 new jobs. This is significant for the Kingdom's quest to establish a more diversified economy by creating such revenue-building blocks for the future.

In the interim, the area will be bustling with construction activities and cooperative effort between Saudi Aramco, its partners, contractors, suppliers, and consultants.

First and foremost among these is our partnership with the Dow Chemical Company. Dow is not only at the forefront of global chemical industry, but also a storied American company, which shares our abiding commitment to quality, reliability, performance, and the environment. Dow will license over 50 percent of the technologies that will be utilized by RTIP, to also share in the feedstock advantages afforded by Saudi Arabia's ample hydrocarbon resources. Additionally Ras Tanura is strategically located to Dow's global market, including the rapidly developing Asian countries. We are proud to be working with a company of this stature.

In developing RTIP the partnership with U.S. firms goes far beyond our work with Dow. For example RTIP is using the services of Kellogg, Brown and Root, or KBR for developing the front end engineering and design. In addition to Dow and KBR a number of other major U.S. firms will help the Kingdom tap a range of proprietary tools and sophisticated industrial techniques. The project will also require some tens of thousands of pieces of equipment many of which will be acquired from American firms.

Clearly this mega project represents a significant piece of business for those companies but they are up to the challenge and we look forward to working with those enterprises for our mutual benefit. Of course, this initiative does not exist in a vacuum. And I would be remiss if I did not address the potential impact of the Ras Tanura project from today's uncertain global situation. At the moment we seem to be moving from a crisis in the financial market to a steep downturn in what people call the real economy. In other words it's no longer just a problem on Wall Street but on Main Street as well. Many of the world's major economies are either already in recession or headed in that direction and even fast developing economies like China and India are seeing their rates of economic growth slow down. All of it has had a negative impact on global petroleum demand which is down roughly 8% since last year. We have all seen the effect on crude oil prices which are now half of what they were earlier in the year.

I think it is fair to say today's tight credit market may impact the borrowing strategies of various industrial joint ventures around the world. However, I also think it is too early in the current economic cycle to say with a degree of certainty what that impact will be particularly given the long term economic viability of projects like RTIP. It is important to know that Saudi Aramco uses corporate funding to finance our portfolio of upstream mega projects and our equity stakes in joint venture downstream projects. Therefore we do not carry debt on our books.

In addition to a prospective flight to quality among lenders the current economic slowdown may improve the short-term economics of these projects. Given the lower commodity prices we are seeing in the market and the fact that essential equipment like building cranes will be more readily available as projects in other markets and other economic sectors are delayed or cancelled.

Above all it is important to realize that consistent with its longstanding business model Saudi Aramco always takes the long view. Frankly we are building these downstream projects not for the next four quarters or even the next four years, but for the next four decades. RTIP and other projects will still be an integral part of our operations portfolio when Saudi Aramco celebrates its centennial in 2033 and they will continue to provide petroleum and essential products to the global economy and the people of the world long after that.

Ladies and gentleman, let me conclude by saying how proud I am to play a role in turning the Ras Tanura integrated petrochemical project from dream to reality. The project offers considerable challenges and magnificent opportunities. It is also extremely gratifying to develop stronger business relationships with our partners, contractors and suppliers. Since many of these firms are located right here in the U.S. I hope these collaborative efforts and shared accomplishments will nurture American-Arab relationships.

Above all I am privileged to be part of an integrated team of Arabs, Americans, and dozens of other nationalities who are building a more promising and prosperous future for us all. Thank you for your attention and thank you Madame Chair.

[HARBERT] Thank you Nabila. Now everyone knows why Saudi Aramco chose you to lead this very challenging project.

Let me move on to Ryan Lance who is the President for Exploration and Production for Europe, Asia, Africa and the Middle East for ConocoPhillips. I'm not sure what that leaves out, Ryan. Please have a little bit of sympathy for him. He is just off the plane from Kazakhstan this morning. So if he looks a little droopy we'll give you a little bit of a break. He began his career with Arco in 1984 in Alaska and over the span of his career returned to Alaska in 1994 and 1998 and not until 2002 did you finally broaden that portfolio to the lower 48 but then on to Asia and to this huge portfolio that you now command. He's also on the board of the American Petroleum Institute and also the Independent Petroleum Association of America and he was schooled in Montana.

[RYAN M. LANCE] Thank you, Karen. And thank you, John, for what looks to be another highly successful conference for the Council.

Hopefully I'll try to address a number of the intriguing questions from your opening remarks, Karen. I'll try to hit a couple of them with respect to collaboration and a little bit of our views of energy independence versus dependence versus security.

I was struck a little bit by a comment that Mr. Bohigian had at lunch today. He quoted a couple of figures that were interesting. One was that we live today in a \$60 trillion economy and that \$16 trillion of that is, comes from direct trade around the world. I don't know what the figure is, or how much oil and gas contribute to that \$16 trillion but I would imagine it's a pretty significant amount. So we depend on each other and we all benefit from that shared prosperity and I'd like to try to apply that lesson a little bit to energy today.



We have the U.S. and Europe and China and Japan and other consuming nations around the world. What do we want? We want energy supply security. Now we have with demand and the prices falling we have the exporting nations around the world that want energy market security. So we all need each other.

There's a recent example in the U.S. over the last three years with the major hurricanes that struck starting with Rita, and Katrina and this last year with Hurricane Ike. It was the first hurricane that I lived through and I don't care to do that ever again. Because of this we saw, recall back to Katrina and Rita, we had gasoline and diesel prices spike pretty tremendously, but it wasn't 30 days later that they came back to pre-hurricane levels.

Now how did that happen? We still had 30-40 percent of our refining capacity in the United States on the Gulf coast out of commission due to those major, major storms. What happened was the classic interdependence that we have in the world today. So crude started to flow from all around the world, the United States, Canada, Mexico, the Middle East, and it came to the refineries that were still working in the United States. Products – petrochemicals, gasoline, diesel -- flowed from Europe, flowed from Europe, flowed from Asia into the United States such that our prices dropped pretty dramatically, so you can see that interdependence is pretty critical. So because of that our company we support open access to markets as well as opportunities to develop those resources. We believe that producing and consuming countries must and can work together.

There's a mutual benefit when national oil companies, or the NOCs, work with publicly traded international companies, or the IOCs. In fact the industry's long-term ability to deliver adequate, secure and affordable energy depends on that collaboration. World demand has been strong in recent years and it's bumped up against global oil production capacity. Although demand has flattened recently as Karen pointed out we expect growth to resume after the world financial markets and the economies recover so the industry must continue to find new resources to replace production and preparing for that future demand. But it's going to be expensive. Today's development projects require longer more complex facilities, longer supply chains and the means to deliver to broader markets. It's true that the leading NOCs have their own impressive technical and project management skills and financial capabilities today but we face a rapidly changing environment.

The tight credit markets could make it more difficult to finance these projects. And we face unrelenting cost and margin pressures during a time of falling commodity prices and lenders don't like those kinds of risks. The financial and operational capabilities of the IOCs can help reduce that risk and help reassure lenders.

Meanwhile technology is evolving rapidly. New resources are becoming accessible for the first time ever. That is, to those producers with the right skills and expertise. For those reasons we believe that collaboration will become more important in the future. I'll give you some parameters of potential collaboration. An NOC is driven by motivations that are strategic. They have commercial objectives. They have national priorities and geopolitical goals. Local content and infrastructure are critical. An IOC must be attuned to these needs. A proposed collaboration must recognize the NOC's requirements while enabling each party to contribute the skills and

competencies they have. In the case of NOCs these skills include knowledge of the country from the geology to the local markets. The NOCs have hard earned experience and finely tuned political and social sensitivities. On the other hand IOCs provide comprehensive technical solutions from their global experience in many different geologic and operating environments. We have big project expertise and data management skills. These are difficult to replicate and are essential in the mega projects that we face today. The IOCs are highly experienced at producing from mature fields. We are experts in secondary and tertiary recovery, and gas lift and other technologies.

We can help maximize the output from conventional, heavy oil and sour gas deposits and these kinds of expertise are going to be essential as these giant conventional fields decline and the NOCs turn to more challenged resources and unconventional sources.

So we are already seeing a new model of collaboration emerge. And they are based on five components. First, complementary business and technical strengths; material stakes for both partners; a dedication to maintaining good relations that have to start with the CEOs of the companies; a commitment to contract sanctity and last a strong alignment of interests, not only on the project goals but in each partner's broader long-term strategic aspirations.

These new models demand a larger focus and a longer-range view than the joint ventures or production sharing agreements that in the past. I don't want to get into a commercial for my company but I think if you, because we all have examples of these joint ventures that work, but I think if you go through a little of them that we're involved, when you get a flavor of the size and scale and the scope and the different things that we're having to do as an IOC today to continue to grow our company.

My first example, actually, doesn't even involve an NOC but it shows the type of close relationships that you have to advocate in today's markets. Our company is an investor in one of Russia's largest companies Lukoil. We have a strategic alliance and we own 20% of that company. A joint venture with them is developing a major Arctic oil development in Timan-Pechora. We participated in the financing and our expertise to help them make possible \$500 million of savings through that expertise. And we're now looking with Lukoil to identify their opportunities in other countries. We share employees. They second people into our company. We second people into their company.

We also work with Norway's Statoil Hydro and its two predecessor companies for over 40 years. We're co-ventures in Ekofisk, the North Sea's first major oil field. This project extended the frontiers of technology, finance and people to people component of energy partnerships. We developed an enhanced respect for resource sovereignty and stewardship. We gained a deeper understanding of the national social priorities and increased sensitivity to cultural values. In turn we contributed expertise in technology, financing, project management, training and development.

Next is our relationship with Qatar Petroleum nearer to the Middle East area that we're talking about today. It's an exceptional broad collaboration that is developing our Qatar Gas III LNG

project. It's even extended to working with another IOC, Royal Dutch Shell, who is a partner in Qatar Gas IV in a single integrated project.

As Ms. Nabilah said we're working with Saudi Aramco. We're engineering a refinery in Yanbu and ConocoPhillips will be an equity participant in that refinery. And we're calling upon our expertise in our global refining projects around the world to help in that endeavor. All the way from Algeria to Libya where we work with both national oil companies there, to our recently announced effort in Abu Dhabi where we'll develop the sour gas field at Shah. And we're also working with people in our hemisphere at Petrobras, a memorandum of understanding to collaborate with them. So it's not a sales job but it's just an effort to seek the size, scale and scope of these collaborations that have to exist today. Because as Karen indicated before 80% of the resource potential for all companies lie in the hands of the NOCs. So we have to figure out collaboration models that work and are win-wins for both sides.

We don't like technical service agreements and that's some of the flavor that we see out there today, because they don't enable us to fully utilize our technical personnel. We want to invest our discretionary cash flow and we want to be able to add new production and reserves to grow and develop our company. So in considering these opportunities we feel that contract sanctity and stability are essential to help control our risks. We need assurance on stable fiscal environment in the long term.

And one final point, as energy producers we recognize the world will need fossil fuels for a long time to come, but there's a growing worldwide interest in alternative and renewable energy and a concern about global warming. We face serious challenges in the oil industry to continue to provide the energy that powers the world economy in the near term. Over the long term oil and gas can serve as a bridging fuel to the energy future but in order to do that the industry needs access to the lowest cost, most environmentally friendly resources. Most of these resources, as I said, are controlled by the NOCs. We believe the best way to supply the energy that the world needs today and tomorrow is through this collaboration between the IOCs and the NOCs.

Thank you.

[HARBERT] Thank you, Ryan. And now we're going to change it up a little bit instead of talking to somebody, or hearing from somebody, that's putting capital at risk, here's somebody who actually advises companies that are putting their capital at risk. Jim Burkhard is the Managing Director of Cambridge Research Associates Global Oil Group, which means that he leads the team of experts that analyze and assess the upstream and downstream business conditions for these investments and the strategies companies should employ. He also develops and maintains detailed short term and long-term forecasts on global crude oil and refined product markets.

He was the project director of the "Dawn of the New Age: Global Energy Scenarios for Strategic Decision Making – The Energy Future to 2030," which really was a very comprehensive study undertaken by CERA. He also served on the U.S. National Petroleum Council, which provided a very comprehensive report to the Secretary of Energy a scant couple of years ago, and I don't

know if he'll be talking about that and he's served a great deal of his career in West Africa making those infrastructure and capital decisions. Jim.

[JIM BURKHARD] Thanks, Karen. And as Karen said, I do work at Cambridge Energy Research Associates, but I am going to speak to you today as a study team member of a report put out by the National Petroleum Council and Karen mentioned that. This was a report called "Facing Hard Truths About Energy" and it was released last year and there was an update put out just about a month or two ago. The NPC, National Petroleum Council, has its origins in World War II and today it exists as a Federal, an official advisory body to the U.S. Secretary of Energy. The Secretary from time to time can submit requests to the NPC to conduct research into different areas and then ask the NPC to offer its insights and views to the Secretary.

In 2005 the Secretary asked the NPC what does the future hold for oil and gas supplies and what supply and demand strategy does the Council recommend to ensure greater economic prosperity and stability for the U.S.? Pretty big question, pretty tall order. When we started to look at how to tackle this question we said, "Gee, you really cannot look at oil and gas in isolation." Coal, nuclear, renewables, they impact oil and gas. And you cannot look at the United States as an isolated actor in the energy market. So what we needed to do was to develop a comprehensive energy assessment at the global level to develop the insights and recommendations that we came up with, and that's what we did.

The study conducted in 2006 and 2007 involved around 350 people from a range of industries and disciplines. There are of course oil and gas companies that participated in it. We also had power companies, financial institutions, universities and a number of NGOs and foreign companies because we did want to get that global reach and input for the study. At the end of the study we came up with what we called six hard truths about energy that framed the recommendations we made to the Secretary and I'll go over each of these six hard truths and I'll briefly summarize the recommendations we made.

The first hard truth and Ryan alluded to this. But coal, oil and natural gas, the fossil fuels, will remain indispensable to meeting global energy demands out to 2030 at least, if not well beyond. The fossil fuels represent trillions of dollars of investment. More than a century of investment in infrastructure on the consumption and supply side. You're not going to replace that overnight. It takes a long, long time. So fossil fuels were important 30 years ago, they're going to be important to us for decades to come. That was the first hard truth.

Second, the world is not running out of energy resources but there are accumulating risks to continuing expansion of oil and natural gas production from the conventional sources that we've historically relied on. These risks create significant challenges to meeting projected global demand growth.

Third hard truth, to mitigate these risks the expansion of all economic energy sources will be required including coal, nuclear, biomass, other renewables and unconventional oil and gas. And of course each of these sources face their own challenges.

Fourth hard truth. Energy independence should not be confused with strengthening energy security. The concept of energy independence is not realistic in the foreseeable future but U.S. energy security can be enhanced by moderating demands, expanding and diversifying domestic energy supplies and strengthening global energy trade and investment.

Next hard truth. A majority of the U.S. energy sector workforce, including skilled scientists and engineers, is eligible to retire within the next decade and it's urgent that this workforce be replenished and trained. One brief anecdote on this. I'm 40 years old and when I graduated from college hardly anybody was going into the energy business, the oil business, because it was a consolidating business. And it continued to do that through the 1990s. Well, now we're living with the impact of that missing generation of engineers.

Last hard truth. The policies aimed at curbing carbon dioxide emissions will alter the energy mix. They will increase energy related costs and require reductions in demand.

So those were the hard truths that we developed and they framed what we call the five core strategies that we recommended to the Secretary of Energy in 2007. And these core strategies whether the oil price is \$150 or \$50 or even less than that these core strategies remain credible and relevant.

The first core strategy is to moderate growing energy demand by increasing energy efficiency of transportation, residential, commercial, and industrial uses.

Second, in the United States we should expand and diversify energy supply, moderate the decline in oil and gas production. And the U.S. has been successful in moderating if not expanding gas production at least recently. Also to increase access to new resources.

Third core strategy. And this is vitally important. It sounds simple. But it is extremely important and that is to strengthen global energy trade and investment. Both Nabilah and Ryan have illustrated the importance of global trade, investment and cooperation to enhance the flow of energy from where it's produced to where it's consumed.

The fourth core strategy. Enhance science and engineering capabilities in the United States.

The fifth. As Co2 emission reductions are considered promote a global framework for carbon management to establish one transparent, predictable economy wide cost. And two, develop a legal and regulatory structure to enable carbon capture and sequestration. That's where you take carbon – say from a coal plant, capture it and store it long term for example in a reservoir. On that issue of carbon whether, regardless of what one may think about how we should tackle global climate change.. not making the comment about whether it's good, bad.. but it does seem that something is coming. Both presidential candidates in the United States advocate some type of carbon regulation. But some type of clarity of the potential costs is important for investors. Imagine you are contemplating on spending billions of dollars to develop a coal plant. Coal plants emit a lot of Co2. And you don't know what the future costs of Co2 will be. When will that cost come into play. So that uncertainty is a significant impediment to some investment to expand energy supply in the United States.

The bottom line to all these strategies is they all must be pursued. This is not an a la carte set of items. All of them must be pursued in order to be effective. The impact of the report has surprised many of us. I'll give you a couple of statistics that surprised many of us that worked on the study. The study report was pretty big, it's a pretty thick report. I saw some copies out there in the lobby if you're interested in picking one up. But there have been 1.5 million downloads of this report from the NPC web site. There have been about 180 presentations and briefings in the United States and around the world about the study results. Such as the one that I'm doing now. And the interest globally has been impressive. It has been produced in seven languages – English, Japanese, Arabic, Russian, Chinese, and Spanish.

So to conclude, a key.. the bottom line.. a key point of the report is that we do need a balanced approach and we need a sustained and long term focus, a focus that goes beyond the two, four or six year time frame. Certainly we do need the short-term commitment but you do need a long term commitment and focus to overcome the energy challenges that the United States and indeed the entire world face right now.

Thank you.

[HARBERT] Thanks, Jim. And I encourage all of you to take a copy of that report, not for the least reason that I know that Jim doesn't want to carry these back to his office, given that they each weigh about three to four pounds. It is a terrific report and congratulations on that.

Jay Pryor is last but not least certainly and is with the Chevron Corporation as their Vice President for Corporate Business Development which as his title implies he's responsible for finding, identifying, and developing the new large scale business opportunities for Chevron. He has been with Chevron his entire career, holding a succession of management positions with increasing responsibilities in Asia, the United States, Europe and the former Soviet Union. In 1992, he then joined one of their overseas subsidiaries which was Tengizchevroil in Kazakhstan. So you and Ryan can trade stories about Kazakhstan. Then he moved on to South Asia and finally on to Nigeria where he had a portfolio that encompassed all of Africa. He is also the co-chair of the Nigerian Business Coalition Against HIV-Aids. So take it away.

[JAY R. PRYOR] Thank you very much to the Council, especially you Karen and John for inviting me to join this very distinguished panel. After next week's elections and as plans are made for the new president and Congress in January it's very important to take the longer view of what's in our nation's best interests and the partnerships that will support these interests.

The conference is especially well placed to examine the long view. Both for the Middle East and with respect to this panel, energy security. The world is focused on the financial crisis presently, but the energy security remains a major long-term challenge that must be addressed by all of us. Just as the financial crisis requires a global response so does the need for long term reliable supplies of energy. My message today is this: the Middle East has been a reliable, steadfast supplier of energy to the world for many years. And the U.S. must strive tirelessly to build and strengthen its long-term partnerships with this region. The foundation for our long-term partnerships with the Middle East is already firmly in place. My company, Chevron, for

example has a 75-year partnership with the region. One of my panelists gave the very beginning, 1933, the seventh well drilled in a string of wells struck oil in Saudi Arabia. Our operations span the petroleum value chain in the Middle East from exploration and production of course, through the value chain to petrochemicals as was mentioned through to marketing and refining. The range of activities over the 75 years has taught us the importance of long term partnership and today that partnership is more important than ever. Why is this the case? To answer the question let's take a step back and look at the global energy picture. Even with the increasing efforts on efficiency and alternative fuels which my company strongly supports, projections of the worlds increased fossil fuel production by 50 percent by the year 2030. Let's put this in perspective. Fifty percent more than today's world which uses 125,000 gallons per second. That's the only way we can meet this challenge through strong partnerships in investment, technology and people.

The importance of the Middle East to the global energy supply cannot and must not be understated. The Middle East supplies over half the world's oil and gas needs. They should be acknowledged for this important role. The role it plays as a reliable, steadfast part of the global energy supply chain. Middle Eastern countries such as Saudi Arabia in oil, Qatar in gas have been and remain strong partners and responsible suppliers.

Saudi Arabia's production recently exceeded 9.7 million barrels per day. They are currently spending tens of billions of dollars to increase production to 12 million barrels and of course beyond that. King Abdullah reinforced the strong production record when he convened, with great leadership, an energy summit last June in Riyadh attended by leading consuming and producing countries and companies. David Riley, my chairman, attended that summit. Of course since then the oil and gas prices have lessened considerably, potentially moderating the financial crisis, but through those sharp drops in prices has prompted a lot of discussion around reducing production levels.

Let me say a few words about Saudi, a country which is special to Chevron and provides a great example of partnership in investment, technology and people. Chevron was the first to ship oil from the Kingdom in the 30s. We recently renewed our 60-year concession in the partition neutral zone between Kuwait and Saudi Arabia for 30 more years. We will be operating on behalf of the Kingdom bringing the most advanced technology to developing the resources and our workforce there, which is currently over 90 percent Saudi.

We're making solid progress in a series of projects to validate the feasibility of utilizing steam floods to produce heavy oil of the eocene carbonate reservoirs. If successful this will mark the first time the enhanced oil recovery technology has been employed to produce commercial quantities from the carbonate reservoirs anywhere in the world.

As an important part of the operations in the partition neutral zone Chevron will continue to transfer technology and apply its expertise in project management, reservoir management, health, safety, environment, and of course drilling and other technologies.

In gas, Qatar has been an outstanding partner, welcoming foreign investment and ensuring continuing supplies throughout the world. Qatar currently exports 745,000 barrels of oil a day

and 18.2 billion cubic meters of natural gas per day. Our experts in the industry estimate that Qatar by 2010 will export 30 percent of the world's LNG, liquefied natural gas. Chevron also partners both in Qatar and in Saudi Arabia in the petrochemicals business.

Another, the UAE is a very vibrant financial and tourism sector. It's also a very important player in energy. The Arab Petroleum Investment Corporation forecasted over the next five years \$395 billion will be spent in the Middle East on projects from oil, gas and electricity. We can look then to many other energy partners in the region. From Algeria, with its natural gas capacity, to Libya, opening up its petroleum sector recently, to Iraq, with renewed help in its oil sector which we contributed through training and support and hopefully in time through some long-term projects.

Longer-term partnerships will also extend the dimensions of energy efficiency and to expanding different sources and types of energy. Deeper trade ties will also align our interests and expand economic growth and energy security. There's a real opportunity for intra-regional cooperation in energy as highlighted by the Dolphin project and proposals for regional electricity grids. Responsible leadership in today's world requires that we identify and work closely with reliable partners. The coordinated global response to the financial crisis provides a partnership model for achieving global energy security. The strong long-term partnerships between the U.S. and the Middle East will help secure the economic growth and the energy security for the generations that follow us.

Chevron believes the long-term strategic foreign and energy policy toward the Middle East is essential. This is policy that recognizes and strengthens partnerships with countries in the region. And a policy that makes common cause not only on energy but in our initiatives for the wider region and the world.

Thank you.

[HARBET] Well, that was a tremendous amount of information to assimilate and now we're going to get on to your questions.

For the first half of this question I'm going to direct it to you Jim and for the second half I'm going to direct it to our industry representatives.

Why did the price of oil rise so dramatically over the course of one to two years and yet fall so quickly by 60 percent over such a short duration. Was it the fault of producers, or the fault of consumers, or the fault of speculators in the market.

And the second half, which I will direct to industry. Given the current oil prices and the dramatic decrease in oil prices and the volatility in the market are you at the point now of recommending the cancellation or at least the delay of any current projects that you have on the drawing board? Or is the emphasis that many countries are placing on renewable fuels including nuclear affecting the decisions and diversifications of your portfolios?

Jim, you get to take a crack at what everyone wants to know.



[BURKHARD] Sure.. on the oil price I think there's a clear answer. The 25-year-old hedge fund managers in the world are clearly to blame for everything that's happened. Just kidding, just kidding.. about that.. just kidding.

If you.. we could spend a long time talking about the factors that have led to these changes in the oil price but if you want to look at the root cause of the oil price rise from 2002 through July of this year. The root cause was rising global prosperity.

We've seen one of the most impressive gains in living standards in many parts of the world – of course, China looms very large in this story. We had the greatest five-year run of global economic growth from 2003 to 2007. Now that was fueled in part by some of the excesses that we're living with today. Nonetheless that five-year period saw unprecedented gains in living standards in many countries and with higher living standards what do you get. You get longer life expectancy, you get lower infant mortality and you get rising energy consumption and oil is certainly part of that.

So higher living standards, greater global prosperity was at the root of the oil price rise that we saw. There are other factors as well but that's the foundation. Why have prices fallen so much? Look at the demand side again. In October in the United States, oil consumption fell by as much as nine percent. You look at the stock market, which has fallen 40 percent or whatever, and you may think, "Oh, gee, that's not very much." But in the oil market world a nine percent drop is massive.

There are times when the U.S. oil consumption was about 1.8 million barrels per day less than it was a year ago. That is a stunning, stunning collapse in demand. Part of that is due to the difficulties in delivering gasoline and other products in the aftermath of Hurricane Ike, so it's a little bit exaggerated but it does point to the economic weakness that this country is experiencing and that unfortunately the rest of the world is too. So we've seen a significant weakening in global oil demand that's become very evident in recent months. And that's one of the factors that's pushed oil prices down so much.

[HARBERT} Thanks, Jim. That's a complex question.

Jay or Ryan do you want to take a crack at what's happening in corporate decision making as a result of volatility and changing prices?

[LANCE] Well, it's certainly flipped our planning process, I know, at our company on its head going into next year. I guess there's a two part.. I'd offer two parts to that question. There are a couple of answers or observations. As we all described up here we're talking about mega projects. We're talking about projects that take five, six, seven years to complete.

In Nabilah's case they'll probably be working ten years and still have expansions to go. Really the question for us is what is the price of crude, and gas, and petrochemicals going to be five, six, seven and ten years from today. So we can't base our companies' plans on fluctuations in the price. We have to set ourselves at a mid-term, mid-cycle outlook on commodity prices. But we

do have to react to the daily vagaries and the fact that oil.. West Texas Intermediate over the last week or so has been bouncing down around \$60 to \$65 a barrel, the stark reality of that is it does impact our cash flows and balance sheets of many of the companies that are out there today in this business. Some of the independents in the U.S. and even the major IOCs around the world.

So we are looking at our plans. We certainly can't afford what we were thinking we could afford even a month ago, going into the next couple of years. So we absolutely are looking back at our plans. But again we try to balance that and we have to take the long-term view of this business. The reality is that we'll invest tens of billions of dollars and we won't see a penny in return for five, six, seven out to ten years.

So it's a very capital intensive business that we're in and a very, very long term business that we're in. That's why stability and some of the issues that I talked about today are vital in our business. You can't whipsaw this business and change the rules in the middle of the game because it takes such a long time to develop these projects.

[PRYOR] I'll just add to a few questions. First of all, I think Jim's dead wrong about the 25-year-old hedge fund trader. But other than that I think he took care of the oil and gas price pretty well with the supply and demand discussion.

I think getting to the budgets and project budgets for IOCs and NOCs, I think you really need to take a long-term view in this industry. Jim mentioned some demand destruction that happened in one month. What I'll say is that if you stop investing the supply can drop as much as 10% a year so you can't, as an industry, to afford to stop investing.

At Chevron we look at it for the long term. Because of the way you set your business up, and that sort of thing, you want to try to keep your people busy up to a certain level. Not overly busy. Not underloaded. So you need to have a view of long-term price and you need to keep with a capital expenditure profile that is pretty efficient for your company. That's the long-term best way to manage this.

I've been with this for 30 years and I've seen a couple of these cycles. And the last thing you want to do is jerk the wheel of a very large vessel or ship. You got to be resolute in think it through. But what you do do is you're going to suffer some delays in projects. It's really because of the financial ability for your subcontractors and contractors to get the money to buy the materials to supply the services and materials to you.

So there is going to be some delay that's naturally associated with the financial crisis and some of the demand destruction, I think. And we're just starting to see the beginnings of that and so that is a bit concerning. You might not be able to deliver exactly what you planned to deliver. So we're yet to really analyze that in a lot of detail.

There's also going to be alternative energies that will come to bear. Our company for instance is very interested in alternative energy. We are the largest geothermal power producer in the world.

What we think is important.. is.. first of all if you want to help.. conserve. I'm an engineer, the first thing you think about is, if you want to really think about demand, Jim mentioned it. In one month just because people quit going out the demand dropped by nine percent. So conservation is a very, very important alternative. That's the piece that I think is very important. But I think keeping the long-term view, keeping the ship steady is the path that we should take through a lot of these ups and downs.

[HARBERT] Nabilah, let me turn to you. The question for you is a bit more complex. As a country and as a company, it is a huge and important producer, but also a growing consumer. You have to look at this from multiple angles and at the same time you have to look at what countries like ourselves and others and what they're policies will be on alternatives to oil and natural gas. So as you think, as you're looking at that as a corporation how does that confound decision making right now?

[TUNISI] I think just like the gentlemen said it is very important in our business to work collaboratively, to look, and we are part of the companies that are encouraging and participating in other alternative energies, in energy conservation, because of the growing demand of energy around the world. So, it does provide additional opportunities for our company and our nation to be part of the global world to assess what other things could we be doing, because we are participants not just providers of energy, but as you mentioned consumers of every technology that is out there that could help whether in production or in alternative energy or clean energy. We are part of that process.

[HARBERT] Fair enough. We are certainly, here in the United States, very captivated by our election campaign and there are a number of questions up here that deal with that so I'm going to combine them into one and ask each of the panelists to give their thoughts. Forgive me if I go on for just a minute to tell you where these questions are going.

First, what are the key channels for the oil and gas industry under the next president?

Play the other side of it, what should the next president do to stabilize, to use your words, the oil markets and how should that affect, and Nabilah, this will be a good one for you, the foreign policy employed by the next president and congress, to a lesser extent?

And looking at the two presidential candidates who have articulated very aggressive goals for greenhouse gas reductions, Senator McCain at 60 % and Senator [Obama] at 80%. Are either of those goals or objectives achievable over the time frame they have articulated?

What are the challenges under the next president? What should the next president be going? What does that mean for foreign policy? And what will that mean for climate policy?

I knew I'd have no takers..

Ryan is the first one.

[LANCE] The key challenges for the next president. You know I believe when you juxtapose foreign policy, energy policy and climate policy, I don't think there's anything more important right now for both the United States and the world because they're all so interrelated.

I think for the next president, you know, we think we've had an energy policy as a country. But we really haven't. And the hard truths from the NPC study were really good. And at the risk of sort of repeating what Jim said here earlier, it's going to take everything and I think the next president has to seriously look at that. We have to take wind, where wind can really help in the central part of the U.S. We have to invest in solar. We have to invest in bio fuels, whether it's corn based ethanol or cellulosic or another generation, algae, lipids, whatever it may be on the biofuels side.

And we need oil and gas. We need conventional oil and gas, we need unconventional. We need tight deep gas, we need sour gas, we need heavy oil, we need all those things in a very balanced and very forward looking policy that then can create energy security for our country.

My personal belief is energy independence -- they came up with in the NPC study -- is not the right tact to be taking. You want to be dependent on the world, you want to be part of this global economy.

I think that's the challenge of the next president. How to create the incentives to start innovation among the alternative fuels. Maybe you have to subsidize them for a little while, but don't subsidize them forever. Let the market decide what's going to be successful and unsuccessful down the road. But we have to jump start all the alternatives and we can't forget about oil and gas. So that we have to have an effective foreign policy. We can't isolate ourselves because the fact of the matter is we consume 25% of the world's energy. We produce as a country less than 4% of the world's energy. So to isolate ourselves is the absolute wrong answer in our effort to become more secure as a nation and understand what it means to play in the energy landscape around the world.

So I don't think there's anything more important when you juxtapose foreign policy on energy policy than you have to consider the greenhouse gas policy. You have to consider as a world, what are we going to do with Co2. When we look at Co2 and we try to address it as a company, it is going to be very expensive. You have to come up with global solutions to it. And the consumer is going to have to see the cost of dealing with it as a nation and a world. Because we're going to have to make those hard decisions and it is going to add cost to the global energy system when you consider what do you want to do with Co2 and how do you create clean technologies which is an absolute must. Because our human activity is having an impact on the world and I think that is undisputable in this day and age. We're having an impact and we're going to have to deal with it. And we're going to have to deal with it in a very worldly, comprehensive fashion.

[HARBERT] Jay, you take a crack at this question as the business development guy at Chevron. Also if you could send a message to the next president about things to be careful about in the oil and gas industry. What challenges do you see in your industry under whoever comes next in addition to the other questions we asked?

[PRYOR] I think in my remarks I tried to link foreign policy and energy policy very closely together. What I'll say from a BD space or a deal flow space is there's a lot of barriers to entry and the more of those you can take down or neutralize the better opportunity you have. If you one don't have a policy, or two, you have a policy that makes it very hard to enter some places. The scope of your opportunity set gets so small it doesn't give you much access to new energy or new solutions to energy.

As Ryan was saying I think we need a lot of different opportunities. We need everything. We need alternatives, from solar to wind. We need different nuclear opportunities. We need to conserve. We need.. by 2030 if we're right, unless everyone just decides to change their quality of life by a lot we're going to need these sources. As China grows, many of you that traveled to China, once they started to grow they don't want to stop either. That's a factor that we haven't really taken into account. There are going to be different opportunities that we don't know today. When I started 30 years ago there was no such thing as a horizontal well. But yet, a horizontal well delivers five times the gas in the tight gas sands in the U.S., than a vertical well delivered when I started with the industry. So what used to be uneconomic is now economic, and it's not just price, it's because the research dollars that were spent and the people's effort to get us to where we are. So I'm a firm believer that technology will play a big role in the future and our ability to cope with these challenges.

Greenhouse gas, I think, is also a very important attribute. The key to greenhouse gas sequestration is try to sequester the places that have the highest concentration because as those point sources get spread out it's very, very expensive to gather them up to one spot to be able to do something about them.

So we have to work collaboratively. Maybe we use 25 percent of the energy here, there may be we can only sequester 10 or 15, maybe the Middle East that has an easier solution to sequester a lot more, so we have to be careful that we don't regulate in such a way that it makes those type of global opportunities impossible.

[HARBERT] Thank you. Nabilah, as you take on the question about foreign policy and the type of foreign policy our president should employ to ensure that we sustain our relationship on an energy basis, also help us understand now that Saudi Arabia is a member of the WTO what that means in terms of how energy deals are being done inside the Kingdom on the downstream.

[TUNISI] One project that I mentioned, the RTIP project, is an example of that collaboration between major companies to basically take advantage of the hydrocarbon resources that we have and leverage those to invest in the downstream and value added projects. And that is just an example of our commitment to really, not in the petrochemicals, but also in the availing of hydrocarbon resources, to the ensuring the stability of the world market.

I have been personally involved in many of our projects that we have invested to increase the level of production and we always ensure that there is a minimum of 1.5 to two million barrels of spare capacity to ensure that we are able to stabilize the world market in oil. A lot of people

don't realize how much investment that takes in hundreds of millions of dollars to ensure stability, availability of crude oil as well as to stabilize pricing.

I think that our records shows that we are committed to the availability of such an important resource and we have been reliable and I think in today's global market and the recent financial crisis indicates that we have become so global and collaboration between not only between companies, but also nations, is very crucial as many nations industrialize and demand commodities and resources really impact all of us.

We saw the demand of iron ore made the Brazilian increase the cost and price of that and that impacted the cost of steel and other commodities around the world. That's how global the world has become. So each of us contributes an important element and as such we really need to be an important citizen of the world.

[HARBERT] Thank you for that. I'm going to ask one more general question of the panel and then the chair's elective, I'm going to ask one closing question of my own that will require only a one sentence answer to the question from each of you so that we can keep on time for the reception that's going to follow this.

If we look at the language of people that are running for higher office and in Congress in our country over the last several years, it started with security, energy security, energy realism. We then moved into energy independence and now we are seeing a great deal of policymakers out on the campaign trail utilize words like, we need to get off foreign oil, specifically, we need to stop using oil from the Middle East. And the mantra has gotten bigger and louder and wider and that is to a very big and broad audience.

It is a very sensitive subject, I know that, but we're here, in terms of the title of the conference – transitioning to the next president and strengthening the relationships between U.S. and Arab policymakers. What do we do about that quote/unquote hard truth, that could be included in the National Petroleum Council's report? That is a hard truth. What do we do about changing that tenor? How do we go about changing that dialogue and how do we go about bringing a little bit more realism into what needs and can be accomplished in increasing our mutual energy security?

[PRYOR] Well one basic step I think is to attempt to increase Americans' energy literacy. A lot of people talk these slogans. President Nixon talked about energy independence in the early 70s, every president has and U.S. dependence on the global markets has only grown since that time, as has the U.S. economy. So I think getting people, the American people are not stupid people at all, I'm not implying that, but trying to educate them about the realities of how large the global energy system is, how important certain fuels are and the long lead times that are necessary to undertake any long term change. So energy literacy may sound very simple but it could have a powerful impact.

[HARBERT] Anybody else.

[LANCE] I think that's right. We don't do a very good job as an industry of telling our story. It's a highly competitive industry and that creates a little bit of issues in and of itself. Karen you

quoted some of the statistics earlier. I take a little bit of comfort in the fact that two years ago our public opinion was less than tobacco. So we've risen at least back above tobacco as an industry with the American people.

So I think we are making some headroads. Just the sheer fact that politicians today are talking about it. I think realizing that there is, again, there's a relationship between energy policy, foreign policy and maybe even environmental policy, they're all so interrelated, that maybe you need to have these conversations today.

I know when I talk to my family who don't realize the business. And the story I tell, bear with me a minute, if you think about the reliability of the energy business today. We drill a bunch of wells, we produce the oil, we separate the water and the gas, we send it to a facility, it gets shipped to a refinery, the refinery cracks the oil, turns it into petrochemicals, turns it into diesel and gasoline, again it gets piped and trucked over to facilities where trucks come and pick it up and take it to a gasoline station where you buy gasoline for your car.

So think about the reliability of that supply chain. If it had the reliability of this piece of equipment here today, you would be paying two or three times what you pay for gasoline today. Because we can't afford to go into a room in the house where I don't get cell phone coverage. I can't afford to go through a tunnel where my cell phone doesn't work, I can't afford to go around that mountain or be in that mountain area when my cell phone doesn't work.

So consider that's the education that we need to do. It's these long supply chains. It's our interdependence globally, with the Middle East and everywhere around the world. That's what it takes in this business today. That's what it takes in this business today. Its long lead ties and hugely capital intensive and we can't afford the reliability of something like this to make it work.

[HARBERT] Nabilah would you like to add anything to that?

[TUNISI] No. I think it was well said. But I hope it is only rhetoric.

[HARBERT] Before I ask my final closing question which will require just a one or two sentence answer, let me just say that the Institute of which I am a part, we have tried to capture the challenges that we've just articulated here and we're trying to inform policymakers about the challenges and opportunities of our energy policy and have released 75 policy recommendations for the next president and Congress to consider.

Soon after the election is over and the votes are counted we'll be releasing a transition plan on how to actually execute and implement those policy recommendations and what time period that they need to be done. Hopefully we'll have some rational things out there for our policymakers to consider -- they're very constructive -- and hopefully adopt.

Let me just ask a question which is just taking the title of what this important conference is: "Transitioning the White House: Challenges and Opportunities for Arab-U.S. Relations."

In each of your perspectives what is the single most important thing the leadership in the United States and the leadership in the Arab world can do in the next year to improve our relationships to the benefit of the energy markets?

[PRYOR] I'll take that first. I think it's a very simple principle that very much associates with a lot of life. We have to develop mutual respect for each other and a deep understanding about the drivers about each other and a cooperation that will go beyond whoever's elected or whatever government is in place that it is more a people to people understanding. I think those are the type of relationships and understandings that are important.

As has been mentioned certain rhetoric inflames a lot of people and some of it's for very nationalistic reasons, but at a business level you have to develop relationships and trust that will allow you to work through the hard times. You don't just exit because you think something is getting tough, or you don't quit producing because the price gets too low. You have to think about it as a long-term venture, just like a marriage.

[HARBERT] Commitment and durability.

[BURKHARD] One thing I would say is to enhance global cooperation and institutions. Global institutions are a way to prevent, manage, or ideally even resolve conflicts. Given how connected we all are, I think global institutions, and I'm not advocating global government, let's be clear about that, but institutions would provide a forum to prevent, manage or resolve conflicts. Bringing China and India into the International Energy Agency would be one example.

[LANCE] Yeah, I'd agree, Karen. I think as has been said business has a unique opportunity. We can work with partners around the world and if we can create a sustainable business model we can persevere through the commodity cycles and through the vagaries of Washington, DC.

[HARBERT] Certainly it is the private sector that will ultimately lead us to increased energy security and government has a role to play for sure, in facilitating the right environment for that investment and that technology to thrive. But they're only a part of the equation. The folks who are sitting up here on the dais are the folk who can manifest the opportunities, and manifest the capital to make these things really happen.

Well, with your indulgence I suppose that we should call it quits for the day. It looks like everybody has put in a good day's work and are anxious to get to your very gracious reception.

Let me just say that energy security is one of our nation's biggest challenges of the 21<sup>st</sup> challenge. It is not an economic challenge, it is not a national security challenge, it is not an environmental challenge, it is not a prosperity challenge, it is not a home and well-being challenge. It is all of the above and we have to approach it like that. We have to have a comprehensive approach. It cannot be inside our 50 states, it has to be global in nature and we have to look at the realities over the horizon. We are going to be dependent on fossil fuels for decades to come. And we do need alternatives and we do need to diversify. And certainly we're seeing that in the Arab world. Many investments are being made in alternative and renewable



fuels in the Middle East and certainly here in this country. We can march along this very difficult road together if we seize the opportunities wisely.

Thank you.

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