Gulf Oil and Gas: What are the Producers Thinking?

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THOMAS MATTAIR: Executive director, Middle East Policy Council, and associate editor, *Middle East Policy*; author, *Global Security Watch—Iran: A Reference Handbook*

Today we're examining what the oil and gas producers are thinking when they make their calculations and which economic and political factors influence their decisions. The domestic economic factors would be their need for revenue, their desire to diversify their economies, their need to satisfy domestic constituencies — and, in the case of Iraq, the domestic political instability that could challenge oil development. In the international realm, what are the geopolitical forces that the producers have to take into account? Where is demand falling, and where is it rising? Who do their most important customers have to be in a strictly economic sense, and who are their most important political and strategic partners? We have some divergence taking place there now, as the customers are in the East and the security partners are in the West.

NATHANIEL KERN: President, *Foreign Reports*

Obviously, none of us here can speak for the governments in the region. But I will describe some of the changes that have occurred in the historic relationship that the United States has had with a key producer — Saudi Arabia — and then look to the future and the mutually beneficial mixture of "hard" and "soft" power each of the two countries brings to the relationship. As we go forward, the U.S.-Saudi relationship is likely to be less oil-centric and based more on shared policy goals in the region. The United States is still the indisputable master of hard power — military superiority — in the region, but Saudi Arabia has developed a surprisingly strong hand in exercising soft power.

U.S. companies can be expected to profit from their own "soft power" — their knowledge-based assets — by advancing a knowledge-based economy in the kingdom, where Saudi Arabia contributes its own hard assets, competitive-priced feedstock and a geographical advantage in exporting to the growth centers of Asia.

For many decades, the U.S. relationship with Saudi Arabia has been described as a relationship between the world's largest oil consumer and the world's largest oil producer, with the United States consuming one-quarter of the world's oil and with Saudi Arabia holding one-quarter of the world's oil reserves. The relationship has been described as a partnership based on "oil for security." Since the end of World War II, Saudi oil production has grown with the U.S. demand for oil imports. In 1950, the United States imported about half a million barrels per day (mb/d) of crude, more or less equal to Saudi production at the time. By 2008, U.S. crude-oil imports and Saudi petroleum-liquids production were both about 20 times higher, or 10 mb/d.

Saudi Arabia first became the number-one supplier of crude oil to the United States in the 1970s. After the sharp price increases of the late 1970s, both U.S. oil imports and Saudi production fell, but both rebounded during the 1990s. At that time, Saudi Arabia adopted a politically driven policy of maintaining its position as the number-one or -two oil supplier to the United States. To some degree, this policy kept U.S. oil prices lower than the rest of the world's and thus may have kept world prices lower than they otherwise would have been. The main U.S. import markets on the U.S. Gulf Coast and in the mid-continent became the epicenters of price competition, particularly among Saudi Arabia, Canada, Mexico and Venezuela.

Saudi Arabia ended this policy in September 2003 for a number of different reasons. For some months during the last half of 2009, Saudi Arabia slipped to fifth place as a source for U.S. crude-oil imports, behind Canada, Mexico, Nigeria and Venezuela. At the same time, Saudi Arabia has emerged as the largest supplier to China, with Iran recently relegated to fifth place.

World oil demand has become increasingly globalized. In 1950, the United States consumed 55 percent of the world's oil. Today, it's about 22 percent. More than half of Saudi Arabia's oil exports now go to Asia. The main source of future oil-demand growth is expected to be in Asia, with the United States and the Organization for Economic Co-operation and Development projected to have flat or perhaps falling demand.

Of course, even if the United States imported no oil from Saudi Arabia, it almost certainly will remain the largest oil importer in the world for a long time. As such, its oil relationship with Saudi Arabia will continue to be critical to the U.S. economy as long as Saudi Arabia's spare capacity, now in excess of 4 mb/d, remains the ultimate arbiter of world oil prices. But Saudi Arabia's pricing power has recently been challenged by the attractiveness of oil futures as a financial instrument. The flow of investment dollars into oil has an uncanny ability to set the price, often in disregard for current physical market fundamentals. These historical oil statistics illustrate to what extent changes in the world have changed the realities of U.S. interests in the Gulf. We rely less directly on oil from the Gulf than we used to, and Asia will play a larger role in providing incremental demand for Gulf oil.

But, as President Obama noted last week at the nuclear summit, the United States has vital national interests in reducing conflicts in the Middle East:

> It is a vital national security interest of the United States to reduce these conflicts because we remain a dominant military superpower, and, whether we like it or not, when conflicts

> break out, one way or another, we get pulled into them. And that ends up costing us significantly in terms of both blood and treasure.

President Obama was making the case that an end to the Israeli-Palestinian conflict was a vital national security interest of the United States because, whether we like it or not, we're stuck in the Middle East.

I think you can also say that Saudi Arabia's leadership knows, whether it likes it or not, that the United States is the only power that can provide a robust defense for the GCC [Gulf Cooperation Council] states against the military aspirations of Iran. This unavoidable interdependence goes beyond oil and is one reason that the United States and Saudi Arabia have been seeking to institutionalize across-the-board cooperation over the past five years — working to help each other out.

The United States and Saudi Arabia launched a Strategic Dialogue when Crown Prince Abdullah visited President Bush in Crawford in 2005, to identify and work together on shared policy goals that go beyond oil and security. There are more than 20,000 Saudi students in the United States; U.S. companies are far and away the largest investors in Saudi Arabia; Saudi Arabia has significant tangible and financial investments in the United States; and the United States is Saudi Arabia's largest trading partner.

Saudi Arabia is also a vital U.S. partner in combating terrorism, in part because it learned the hard way that it had to understand the mind-set of Islamist terrorism in order to defeat it. It probably has a more sophisticated understanding of this mind-set than any other government. It also has the religious authority to counter extremist jihadi ideology. Across the entire region, Saudi Arabia supports moderation against extremism: in the Israeli-Palestinian dispute, among competing Palestinian groups, in Lebanon, in Afghanistan, in Iraq and in Pakistan. It is no secret that President Obama and his top cabinet secretaries spend more time coordinating with Saudi Arabia over regional issues than they do over bilateral ones.

One of the goals the United States and Saudi Arabia share is opposition to the regional aspirations of the Islamic Republic of Iran. I know that Jean-François Seznec has written eloquently about his conviction that "the Saudis are more worried about potential U.S. military action against Iran than they are about the Iranians' ability actually to obtain nuclear weapons."

I would have to leave it to the Saudi government to agree with or contradict him or even remain silent on the subject. As you know, Secretary of Defense Robert Gates some months ago wrote a memo on Iran identifying "the next steps" in the defense-planning process, where further policy decisions would be needed. I am sure it would be a mistake to assume that "next steps in defense planning" are limited to a decision whether or not to attack Iranian nuclear facilities. Enhancing defense capabilities in the Gulf region is the ongoing focus of U.S. defense efforts, but these efforts could be intensified by many orders of magnitude.

It is quite clear that neither Saudi Arabia nor any of the other GCC states would like to become subservient to a nuclear Iran. Iran's potential to exercise nuclear blackmail over other Gulf oil producers exists. Iran does not hide its aspiration to be the dominant power in the Gulf, calling the shots as it sees fit. Three times since last December, when Iran first announced that it would enrich uranium to 20 percent, President Ahmadinejad has given major speeches in which he has asserted that whoever controls the Middle East, with its energy resources, can control the world and that no power can control the Middle East without Iran. In his latest such speech, last week, he proposed that President Obama could only win a real foreign-policy success if he cooperates with Iran in establishing a U.S.-Iranian condominium over the energy of the Middle East.

As far as I can tell, Ahmadinejad is living on a different planet from the rest of us, but his vision of Iran's destiny appears to have rallied a good deal of Iranian nationalist support behind him, even from Iranian critics who despise him personally. This is important. Iran's opposition movement came to life after last June's controversial presidential election. For the next seven months, the opposition appeared to be gaining some strength, culminating in a strong showing at the end of December's Ashura ceremonies. The presence of a vibrant, popular opposition posed the tantalizing possibility that internal regime change might lead to a genuine negotiated end to the Iranian nuclear threat. But the opposition movement fizzled thereafter, thanks in part to the heavy investment the ruling regime made in repression.

The fizzling of the opposition movement coincided with the collapse of the Obama administration's diplomatic outreach to Iran, with growing evidence that crippling UN sanctions will not be in the cards, and with steady Iranian progress towards a nuclear-weapons capability. I can only surmise that one of the reasons the opposition fizzled was that a vast majority of Iranians want their country to be great and powerful and that, whatever Iranians may think about Ahmadinejad, many may see him as an effective instrument of Iranian nationalism.

If neither diplomacy, nor sanctions, nor an internal upheaval will prevent Iran from becoming nuclear capable, then military action or containment are the two remaining options for the United States. Containment can include many different levels. During the Cold War, the United States had 15,000 nuclear weapons aimed at the Soviet Union. In the final decade of the Cold War, President Reagan sought to roll back the Soviet Union's ambitions beyond its borders, with some notable success.

Any effective containment policy would include rolling back Iran's extraterritorial ambitions, not conceding them. Saudi Arabia and the United States share this goal. Iran clearly has influence in Lebanon, in Iraq and possibly in Yemen. Iran's stated military doctrine relies on its perceived ability to use its extraterritorial influence to damage the vital interests of any adversary.

Saudi Arabia brings a useful set of skills to countering Iranian influence in places like Lebanon and Iraq. In both Lebanon and Iraq, Saudi soft power is exercised more overtly than Iran's covert assistance to armed groups. Cash plays a bigger, but entirely lawful, role in Lebanese politics than it should, but U.S. policy precludes it from spreading cash around to win votes in elections. After Hezbollah did less well than it expected in Lebanon's 2009 parliamentary elections, its leader, Hassan Nasrallah, gave a speech in which he conceded that Saudi Arabia had vastly outspent Iran in the elections. He jokingly acknowledged that this spending was so popular in Lebanon that many Lebanese now favor elections annually instead of every four years.

But it's not just Saudi cash that gives it soft power. This week, for example, the Lebanese Druze leader, Walid Jumblatt, was asked if he would ever go to Iran. "If I am officially invited to visit Tehran," Jumblatt said, "I would consult a friend and a great brother, namely King Abdullah bin-Abd-al-Aziz, who has been a friend to the extended Jumblatt family since the 1970s. He has been a great brother all of the time. The rules of courtesy and political and personal civility would oblige me to consult with King Abdullah bin-Abd-al-Aziz."

After the March 7 Iraqi elections, Iraqi politicians and leaders have been much more eager to be seen visiting with King Abdullah than they were in paying court to the Islamic Republican Guard commanders. The leading Iraqi politicians — Sunni, Shia and Kurdish — visited Riyadh with great fanfare, in contrast to their almost surreptitious visits to Tehran. Prime Minister Maliki complained loudly that he hadn't been invited to Riyadh.

In Afghanistan, both the Karzai government and the Taliban wish to be in the good graces of the Saudis, while they tend to compete with each other in seeming to alienate the United States. When he went to visit elders in Kandahar earlier this month, Karzai told them of an unofficial visit he made to Saudi Arabia to perform the minor pilgrimage. King Abdullah, he recounted, "called me, asking me to come to Riyadh, to meet him. And I went to Riyadh, and he came to the airport to welcome me. He is an older man like my father. He took my hand and took his own car and we went to his castle. As kind uncle and father, he gave us love and passion, and I received the highest medal of Saudi Arabia, the Malik Abdul Aziz Medal." These are just a few examples of Saudi soft power. They have many very deep relationships throughout the region.

Many of the new U.S.-Saudi business opportunities are ones where U.S. companies contribute their own soft power and the Saudis, hard assets. In the oil industry, we are seeing a change in the classic role of major oil companies, which traditionally provided capital, market access and technical know-how to the region's oil resources. Capital and market access in many ways were the old hard power of the major oil companies. The GCC states have ample capital today as well as market access, and they can acquire much of the technical know-how they may need from service providers. U.S. oil companies more recently have provided their edge in knowledge — their soft power — to develop GCC petroleum resources. Certainly that was the case with ExxonMobil's singular role in developing Qatar's LNG [liquefied natural gas] industry. Chevron is providing its deep experience in steam-flooding to enhance recovery in the Neutral Zone. Occidental often says it is in the business of recovering, not discovering, oil; it has successful projects in Oman, like Mukhaizna, and other countries in the region for tapping oil that otherwise is not recoverable.

In petrochemicals, Dow Chemical and Saudi Aramco are deep into a feasibility study for a major new petrochemical plant. Unlike many other such plants in the region, which primarily produce commodity petrochemicals, the Dow-Aramco project aims to produce literally thousands of specialty products for the regional and broader Asian markets. This will enable Saudi Arabia, together with U.S. companies, to capture more of the value chain from its hydrocarbons.

On balance, then, from a historical perspective, the nature of the U.S.-Saudi relationship is undergoing a subtle but unmistakable change. It is becoming less oil-centric and instead is based more and more on multiple ties: mutual interests and different capabilities, with the United States having unparalleled hard military power and Saudi Arabia having some singular abilities to exercise its own kinds of soft power in a region it knows so well. If, as

President Obama noted, we're stuck in the Middle East, whether we like it or not, the United States and Saudi Arabia might as well concentrate on how we can help each other out — both in regional political goals and in advancing our mutual commercial interests.

FAREED MOHAMEDI: Partner, PFC Energy

Nat has spoken today about how the Gulf is yet again becoming the center of the world's oil industry and supply. It certainly became that after World War II, as it became central to U.S. plans to rebuild Europe and Japan. Now the Gulf is becoming very much integral to the growth of Asia. We at PFC Energy see the formation of a pan-Asian grid for the supply and demand of crude oil, refined products and natural gas. Draw a line straight north from the Gulf all the way up to Russia, and you can see all the suppliers that are increasingly facing East and supplying and/or planning to supply the big industrial machines of China, India and Southeast Asia.

This is becoming the biggest trading system of oil in the world, with a whole new set of players. While the old trading system under American postwar tutelage was run by the IOCs — the international oil companies: ExxonMobil, Chevron, Texaco, BP et cetera — the new players are the national oil companies. This is one of the big phenomena that we're seeing: this pan-Asian grid is now becoming the domain of the national oil companies. Saudi Arabia, as Nat told you earlier, is very much integral to this. In fact, Saudi Aramco's growth plans are increasingly about facing east. They are building capacity in the oil sector to service that huge colossus of industrial Asia.

They're also, in many ways, politically and economically turning east — and Jean-François will tell you this later — not only in terms of crude oil, but in terms of petrochemicals and other industrial output. So, in a sense, West Asia is becoming very much integrated with industrial growth centers in East Asia. From our point of view, this is a very exciting phenomenon, since economic growth is taking place from the Arabian Gulf all the way to the South China Sea at an almost unprecedented level. And the Gulf is finding itself, in a sense, back as part of the Asian continent, which I think is very good for the long-term economic growth prospects of the region.

Another element related to these developments that I want to point out is that OPEC is becoming important to the pan-Asian grid since at the center of this system is Saudi Arabia, which has invested heavily in maintaining excess capacity. That is essential for managing the physical oil markets over the next several decades and providing Asia with energy security.

Not only has Saudi Arabia invested in building capacity and providing the world with sufficient oil resources; all the GCC countries have managed their economies extremely well over the last decade. You've got a sense of economic stability that is unprecedented. It is very important for consuming countries to know that the oil they're getting is coming from stable and resilient economies. This contributes to political stability. I've argued here and in other places that an economic revolution is taking place in the Gulf.

So undergirding this oil-supply system is a fairly stable economic system that has allowed Saudi Arabia to play a very responsible role in stabilizing the global economy. You've seen the Saudis act this way, for example, in 2008, when they felt the oil price went up too much — to $150 per barrel. King Abdullah invited consumers and producers from all over the world to come to Jeddah to discuss the oil issue. In fact, he ordered Saudi Aramco to increase production by 1 mb/d, which contributed to the decline in oil prices at that time. So, at the heart of the new economic system in the world, you've got a producer that's interested in keeping oil prices stable and affordable for its customers, not only in the West but also in the East. That's another aspect of this that is quite positive, looking forward.

Added to this system of the pan-Asian grid, robust consumers and able producers, you've got a new phenomenon: the rise of Iraq and the prospect of new Iraqi oil. It's been shrouded in uncertainty because of the politics of Iraq, but I think we are now starting to see the beginnings of foreign-oil-company interest. They have contracted with the Iraqi government to invest billions of dollars to develop this sector. It's very difficult to predict what the production will be. Will it be another 6 million b/d, which is phenomenal; will it be 3 million b/d? It's difficult to say. But it's quite clear that we're going to start to see a lot of new production coming out of Iraq in the next five to 10 years.

This could be destabilizing to the oil markets because, on top of the excess capacity that has been built up in Saudi Arabia, you will start to see a lot more capacity and production coming out of Iraq. So future OPEC negotiations over prices, interestingly enough, will not be decided in just one city — Riyadh — but in two — Riyadh and Baghdad.

Those of us who remember some of the "interesting" negotiations of the 1980s between Baghdad and the rest of the Gulf shudder to think of a repeat of those days. However, I do think that most oil producers have realized that the shenanigans of the 1980s were not particularly productive and may not want to go back to engaging in them. I'm not implying that we're going to have another invasion of a neighbor over oil, as we did in the '80s and '90s, but I think OPEC negotiations and haggling will become more complicated in the future. So that's how we see the world of oil: shifting to Asia, with Saudi Arabia and the East Asian countries very much at the center of a new trading system, especially with the growth of Iraqi production.

When looking at the Gulf, one area that has been neglected in terms of energy has been the whole issue of natural gas. Nat alluded to the rise of Qatar as a major LNG producer; it is going to continue to be one. So the Gulf has become very important not only to oil supplies, but also to gas supplies.

The other aspect of the Gulf that's very important in terms of global energy is that it's not only become a big supplier (of oil and gas) but also a big consumer. This is due to the whole phenomenon of the Gulf's becoming a viable, long-term, stable, growing economy. It also now needs its oil and gas supplies for itself. In fact, ironically, it is a net importer of natural gas. Even Iran, which has the second-largest reserves in the world, is a net importer of gas.

It used to be believed that LNG from the Gulf would almost unite the various separated gas markets of the world. Oil markets are unified because crude oil supplies are fungible; oil flows all over the world. Gas markets are still regional. And LNG was thought to be the sort of glue that would bring world gas markets together. But a strange thing has happened in the last two years with the phenomenon of the growth of unconventional gas in the United States — shale gas or whatever you want to call it. This massive increase of domestic gas has now created a situation where the United States is, yet again, self-sufficient in natural gas. It's actually backing out of LNG from the Gulf and may be pushing it off to Asia and making it much cheaper around the world. The Gulf is now faced with the threat of U.S. domestic supplies and the possibility that unconventional gas discoveries around the world could reduce its dependence on gas from the Gulf.

The other phenomenon that is threatening Qatar's primacy in LNG is the phenomenon of Australian gas. Australia could become as big a gas producer as Qatar — possibly over 70-80 million tons a year of LNG. So Asia-Pacific could become much more dependent on countries in its own backyard. This is very interesting for global energy dynamics.

LOU PUGLIARESI: President, Energy Policy Research Foundation (EPRINC)

At EPRINC, from time to time we like to challenge the conventional wisdom on the outlook for oil and gas markets. If you think about recent developments, we've already had a lifetime of surprises, so-called game changers. These include the unexpected surge in U.S. natural-gas production from the shale-gas revolution, the unexpected surplus in world refining, new finds in Latin America, and of course Iraq — by any standards, a huge game-changer for the world market.

When the Iraqis held auctions in December 2009 to transfer 60 billion barrels of reserves for development by foreign oil companies, it turned out to be the largest transfer of petroleum assets into the production stream of the world market in the history of the petroleum era.

When the Iraqis held auctions in December 2009 to transfer 60 billion barrels of reserves for development by foreign oil companies, it turned out to be the largest transfer of petroleum assets into the production stream of the world market in the history of the petroleum era. This is a phenomenal event. It's interesting that, outside our community of market analysts, you don't really read a lot about this. I'll give you one other interesting statistic. If, as a result of everything that's happening in Iraq, the price of oil is $20 less than it would be in whatever your business-as-usual case is, the net present value — real money to the U.S. economy — is a trillion dollars. The joke around town is, we could have paid for the war for this.

We continue to worry about the potential for future "price shocks," but we may now be entering an era where we face the genuine potential for a "supply shock." All the researchers who used to occupy their time attempting to build models of OPEC behavior are going to have a new opportunity to test their theories because interest in understanding OPEC behavior is likely to come back into favor.

The other interesting thing about the auction is that it went through two rounds. The first round failed miserably. All the bids were rejected. The bidders had a lot of problems with the tax regime. But the Iraqis made some adjustments, and by the second round they got phenomenal bids. Another important point, though it's not quite law yet, is that under the provisions of the contracts, the revenues will be shared on a per capita basis. This means that even Kurdistan will receive about 17 percent of the revenues. This, by the way, is more than they're getting from their development projects locally.

I think in both the first and second rounds, the bidding companies far exceeded the proposed target volumes. One of the reasons the process worked was that, because you got a fee of $1-$2 a barrel, you could get an advantage by bidding a higher volume. But, once again, I'd like to point out that these are contracted volumes. The companies could not just willy-nilly bid these higher volumes. They're not going to get their costs recovered if they miss the targets.

I think some of the outstanding problems that will remain are building out the infrastructure, although we think that none of these are insurmountable. But they are substantial challenges, particularly building out the ports and expanding export capacity. A lot of work needs to be done there. Another issue is that the auction represents the first significant break from the prevailing oil-industry structure in the Gulf in the last 40 years. Since the wide-scale nationalization in the '70s, the companies have had limited ability to exploit and develop the reserves in these countries, which have been dominated by national oil companies.

I think it's very interesting that Total, which I thought should have gotten a project there, did not. We've seen them go back now, thinking that, well, maybe we did make a mistake; maybe these terms aren't too onerous. Some of the companies that didn't get in there are now looking back at it again.

Where does this leave us? Much of the debate during the last few years over peak oil, we think, has moved from a discussion of below-ground issues — geology — to above-ground concerns — politics and resource nationalism. While the geology is difficult to change, the above-ground issues can move quickly. That's the Iraqi story. We went from a period where expectations were quite limited and pessimistic to one that's quite positive. How this all plays out will keep us busy for a good while.

Although we can conclude that the Iraqis are moving in the right direction, there's a large portfolio of risks. I think, given the stakes for the United States, for the world economy, that's where the attention ought to go: this portfolio of risks. And they cover a large range: There is a contract risk regarding cost recovery. You could get to the point down the road where the cost recovery is substantial, and the Iraqis may be reluctant to authorize very large payments. But keep in mind that these payments can be made in oil instead of cash.

There's also the struggle for political leadership. We've heard a bit about this already. The Arab-Kurdish conflict remains outstanding. Then there are these debts. And some companies chose not to bid, not to participate. The Iraqis still owe money to Kuwait and Saudi Arabia, and they haven't resolved the UN debt. This all needs to be worked out.

There's also the stability of the tax regime. I think some of the companies are nervous about that, and whether the tax regime will remain stable over time. The carried interest in the fields was also an issue as the Iraqi National Oil Company required up to 25 percent in some cases. The infrastructure remains a formidable challenge. We've got a lot of rigs to move in there, a lot of things that still have to happen. But, as we say, none of these uncertainties really are insurmountable. The interesting thing is that, when you look at how valuable this is to the United States and the world economy, it raises a question: what is the administration doing? They're working on biofuels and solar, which largely eats money from the economy, particularly in an era of fiscal fatigue. And here we have an event taking place halfway across the world that can generate enormous benefits for the United States.

JEAN-FRANÇOIS SEZNEC: Visiting associate professor, Georgetown University

I just got back from Saudi Arabia last night, so you might see sand dropping out of my ears. It was actually a very exciting trip. What I'm going to say is in no way in opposition or disagreement with anything I've heard so far. Perhaps it's just going to clarify some of the points or put them more in my own perspective.

In essence, what we are witnessing in the Gulf right now is very exciting, because there's a major industrial revolution taking place. This is based on the will and vision of the leaders of Saudi Arabia and the UAE, in particular, and Qatar to a certain extent, to move away from being single-commodity producers to diversification and the development of knowledge-based economies. The way I put it sometimes to my students is that one could compare, with some optimism, the development of Saudi Arabia today to that of Germany in the twentieth century, when it moved away from being just a coal producer to being the largest chemical producer in the world. Looking at present production and the plants being built, it appears that Saudi Arabia will be the largest producer of chemicals within five years. Therefore, it will have as much influence on the markets of chemicals as it does today on the oil markets.

The Gulf does not want to rely on oil in the long term, because it's a nonrenewable commodity. They want to be able to cut down on the production of oil and use less oil to make more money. A barrel of oil today will sell for $70 to $80-$85 a barrel. But if you make it into various products like chemicals, metals or other energy-intensive items, you can end up making $300 to $1,000 a barrel. Ultimately, that means you can count on the Gulf's exporting less oil. By the Gulf, I mean mostly Saudi Arabia and the UAE. The Saudis today are exporting a little over 7 mb/d. And I think within a few years you will see that these exports will be cut to probably below 5 mb/d.

It is very interesting to follow the oil developments in Iraq. I personally believe that Saudi Arabia is not opposed to having Iraq as a competitor in oil. Ultimately, the Saudis don't want to be under pressure, by the United States in particular, to be the supplier of last resort, as they have been considered by the U.S. Department of Energy. The Saudis want to keep that oil and channel it into knowledge-based, value-added production. So seeing Iraq emerge as a one-commodity producer is really good for the GCC states, in the sense that it doesn't put them under pressure to use their own nonrenewable resources.

Fareed has mentioned that the Saudis have increased capacity to 12 mb/d and, at this point, only produce 8.2 mb/d. As we see the development of the economy, electricity and particularly desalination, we find that the Saudis are going to increase usage of their own oil from 1.5 mb/d to about 4 mb/d. As their usage of domestic oil for their own good increases, it's going to mean fewer barrels on the market. Of course, there's the whole issue of keeping the barrels in the ground because, otherwise, they will be gone forever. Also, the Saudi leadership want to use Saudi oil to maximize their profit and minimize usage. All of these countries, especially Saudi Arabia, have local populations that are growing extremely rapidly, and they need to create new industries for jobs, while keeping enough oil for future generations.

When I mention the leadership in Saudi Arabia, I do not mean just the royal family. I'm one who does not believe that the role of the royal family is all-encompassing in Saudi Arabia. Perhaps the State Department would disagree with me. However, I think the leadership of the kingdom of Saudi Arabia is with the king, yes, but also, mostly with the civil servants, like Ali al-Naimi, the minister of oil, and people of this ilk. These people want to push the kingdom into the twenty-first century, kicking and screaming if necessary, and they are in the process of doing it.

When you travel in Saudi Arabia extensively, as I have done for the last two weeks, it's amazing to see the difference. I used to live there in the '70s, and to see the difference between then and what it is today is absolutely staggering. They want to develop their own nation and their own people, but why? They want to do this because they view themselves as a world power. That may be a bit arrogant on their part — and on the part of the UAE as well — but, by increasing their presence and their footprint in value-added production in addition to energy, they really can become a world power.

Fareed mentioned what's happening in Asia. I think we see the importance of Saudi Arabia in China and India. It's moving up very quickly. Prince Salman was just in India for five days this week and made some really interesting contacts there. They want to be as dominant in all these industries as they are in oil.

It's a very tall order, needless to say. They still have a long way to go, but they are really trying hard. They still have enormous problems with education, but they are addressing them. A group of Georgetown academics recently went to Riyadh to hold a small conference on education, a sort of private workshop. It is obvious that the Saudis know they have a problem, and they're trying to tackle it, just as they knew they had a problem with industrialization, and they have been tackling that. They know what they don't know; I think that's probably their most significant quality.

The consequence of all this is that the Gulf cannot be counted on as the producer of last resort. I think that's where Iraq — and perhaps later on, Iran — through making crude could come in. Iran is, of course, a major issue for the Saudis. But, as I have mentioned, as did Tom, the GCC is extremely opposed to a Western or Israeli military strike on Iran. If there is a U.S. or Israeli military strike — for the Gulfies it is the same thing — on Iran, it will bring this economic miracle I just mentioned to a screeching halt. Investments will stop immediately. A lot of the foreign staff who, especially in the UAE, are manning most of the factories will leave. There will be internal strife in the Gulf, where there is a very strong Shia community, pushed by Iran, obviously.

The GCC Shia are mainly Arabs, not Iranians, and there's very little lost love between the two. Nevertheless, the Iranians could find a few supporters to create havoc in places like Bahrain and even the east coast of Saudi Arabia. Kuwait, in particular, could be very sensitive to these issues, as could Qatar or the UAE, where you have very small but strong Shia communities. This could really bring a complete halt to the development of the region. The Saudi leadership knows that if the development of the region stops, they will not be successful in marginalizing their conservative religious establishment. People would not be able to find jobs, and this could create a lot of pressure on the Saudi government. Yes, they're worried about Iran, but the priority is to ensure the continuity of their growth so that, in the long term, they can marginalize Iran.

I'm a proponent of using sanctions against Iran. By using the sanctions to keep Iran very weak, you will increase the transfers of money from Iran to Dubai — about $10 billion a year today. The elites of Iran are sending the money to Dubai, and that is weakening Iran's stature. Now, the GCC is worried about the nuclear issue, but the GCC states all seem to have decided to go nuclear. Just three days ago, the king of Saudi Arabia announced that they would build a nuclear electrical facility, and the UAE has already signed contracts with the Korean to build nuclear reactor. But the GCC states do not want a military strike. I cannot emphasize this strongly enough.

I'd like to finish on an issue that has already been mentioned: natural gas. It's not directly related, but the fact that the price of gas has been decoupled from the price of oil is of great importance to the Gulf. One of the reasons the Saudi industrial miracle is happening is because they have always refused to export natural gas. In the '70s, the minister and the king at that time decided not to export gas. They're gathering the gas and using it solely for their own internal consumption. The only GCC states that export their gas are the UAE, Qatar and Oman. If we make a back-of-the-envelope computation, the price of gas today in the United States, which hovers around $4.50-$5.00 per million BTUs, is equivalent to $30 per barrel of oil. Why would the producers move to other fuels, like nuclear, unless they are actually low on gas supplies, like Saudi Arabia and the UAE?

With the price of gas so low, one can expect demand to grow. Qatar is producing 46 million tons of LNG per year today and will be producing 72 million tons per year by the end of 2010, with a new ExxonMobil plant. The new Qatar LNG plants were originally built to provide energy to the United States. But all of a sudden, the United States, as has been mentioned, is now breaking even in its need for gas. So these tankers full of LNG are going to float around the world looking for customers, especially in Asia. Most Asian customers have long-term contracts with the Gulf producers, based on the price of gas being at parity with the price of oil. So today, you can see that North Korea is probably — and I say probably because I have not seen the contract — paying something like $10 or $11 per million BTUs for liquid natural gas. If, all of a sudden, the Korean electricity company were to get a call saying: "We have an LNG tanker for you, at $6 a million BTUs. Are you interested?" Well, you bet your boots they will be interested. I think what we will see, to the great dismay of Qatar and perhaps of ExxonMobil and other oil companies, is that the price of gas in the Far East, from LNG, is going to decline very rapidly. Everybody has been saying that Qatar is making a great deal of money. The average GNP per person in Qatar is over $100,000. However, we are going to witness, I think, a very major decline in income in Qatar and other gas exporters. It's going to hurt Russia as well, because even though gas prices are not international and are quite segmented, the large supply of LNG is changing this segmentation. Qatar is already the largest supplier of LNG, but the rumor from Australia is that in a few years it will be even supplanting Qatar in the Asian market, so the price of gas will likely remain decoupled from oil.

This will have consequences in terms of politics. Iran has the second-largest reserves of gas in the world, even though they are very badly managed at this point. There's so little capital that they are still a net importer from Turkmenistan. This will impact them greatly. It will impoverish producers like Iran.

Q&A

DR. MATTAIR: Let me, as the moderator, ask the first two questions. Just for the record, Fareed, can you talk about the domestic economic reasons for the producers to be concentrating on gas? What is it about their domestic economic development and their environmental concerns that leads them to that? Second, I notice that there are more and more stories about how these producers are spending more on offshore oil and gas fields. Could you comment on that?

MR. MOHAMEDI: The technology for a lot of the gas that's being found in the United States has been around for a while, but what was not around was the price. Suddenly, the price went up, and a lot of the smaller players just rushed in looking for a good business venture. These small players drilling many wells have led to an enormous growth in gas, and it's coming out of the ground. Now, ExxonMobil has bought up a fairly sizable small company, and it's attracted the attention of the big players coming into the United States. Then there's the whole phenomenon of learning about how to do this and taking it overseas and seeing if you can find gas in different places around the world.

The other reason, I think, has been access. As oil prices went up, national oil companies became much more powerful in their own countries, and it became more difficult for the big players and the small players to get access to the reserves around the world. Seventy-five percent of the reserves of crude oil and gas are really owned by national oil companies, by governments. So access has been a very big issue.

That's why Iraq was such a big news item: one of the biggest provinces in the world was opened up to the international oil companies. But the significant news there was that it was the national oil companies that came in, in a big way. Many people thought that this was going to be the province of the private companies. It also became the province of the national oil companies from consuming countries.

Why has offshore become a phenomenon? Technology, again. The national oil companies of some of the provinces, especially on the African side of the Atlantic Basin, found it technologically difficult to access the offshore; it's more complicated. On the South American side, Petrobras has the offshore technology and is going to be ruling that province and exploiting it to the point where Brazil's oil output goes from something like 2 mb/d to 5 mb/d. But mainly, the international oil companies have found offshore a good business prospect because they could get access to it, and they have the technology.

DR. MATTAIR: Would you agree that they see gas as a more efficient fuel for producing power, for producing electricity, for diversifying their economies, and that they would want to preserve oil and use gas instead? Is that an explanation?

MR. MOHAMEDI: I think that from a macro-policy point of view, from an environmental point of view, gas is seen as more efficient, environmentally sound, et cetera. It's become commercial because the oil companies couldn't get access to oil. So they got more access to gas around the world. They developed it because of that, and then they created markets all around the world.

DR. MATTAIR: My second question would be for Lou: How do you assess the prospects for Iraq's meeting its targets, given the fact that the Iraqis really haven't achieved some of the most important political compromises they need to achieve? There are problems with forming the government and problems with the oil law. There are predictions that Iraq could conceivably descend into serious civil violence again.

MR. PUGLIARESI: You can't discount any of that. This is all legitimate risk; there's a huge risk profile. It's interesting that there was a lot of granularity in the bidding. The companies did not bid on West Baghdad, and they didn't bid on certain areas. They bid on the south; it's largely Shia, where they have a lot of confidence in the stability. They have a lot of confidence that the technocratic side within the ministry has enough influence, no matter who's in power, to take this through. But there's a lot of risk. What's interesting is that a lot of the players, a lot of NOCs, are there, with the Europeans, the Americans, the Chinese and the Russians. We all have a stake in this area remaining stable and continuing forward.

Even if you were Iran, you'd probably have second thoughts before causing a lot of problems. It's not as if it's just the United States. I think that, for us, the next stage is to get a better handle on political risks. But we see this, from the research point of view, in the longer term. Clearly, the companies have bid with their feet; they showed up and put up their money. They've found the risk acceptable.

DR. MATTAIR: Not only that, but, to go back to Professor Seznec's point with China and Russia in Iraq, as well as in Iran and in Saudi Arabia, they also have a stake in the outcome of the situation with Iran. Military strikes harm their economic interests as seriously as they do Saudi Arabia's.

MR. PUGLIARESI: In the '70s we had something called the Working Group on Persian Gulf Security, which was just us, the Europeans and the Japanese. Maybe we need a new group on Persian Gulf security that includes the Russians and the Chinese.

DR. SEZNEC: I think the amount of money being invested in production in Iraq is so large, and there's so much hope on the part of the Iraqis, for the first time in a long time, to actually make some money and get their country going again, that it doesn't really matter which government is in place, whether it is Iranian-controlled or not. I think the majority of Iraqis are really nationalistic. They believe in Iraq and not really in being Sunni or Shia, or anything else. They need the money, so whatever government is in place, if they know they can go up to 6 or 8 mb/d, I think it will happen. I'm relatively optimistic.

MR. PUGLIARESI: This is a good deal for the Iraqis. It is in the Iraqi press — they saw how the first auction went and that it was followed by the second auction with these high revenue takes. Even if Muqtada al-Sadr takes over and says, "Let's nationalize these guys," someone's going to say, "You're going to lose a lot of money." Occasionally, rationality does emerge. And we hope that it sustains itself.

Q: If you look at the Gulf — Saudi Arabia and the UAE, in particular— they have very full hands with a lot of infrastructure programs. What are OPEC negotiations going to look like? Can they work it out? What lessons can be drawn from the '80s and '90s or more recently, particularly among the Arab states?

MR. KERN: One of the big factors to look for is who's going to be the next prime minister in Iraq. If it's Maliki again, the Saudis and other Gulf states can't stand him. If it's Allawi or someone like that for the next four years, I think there's a reasonable prospect for working out an arrangement where, essentially, Saudi output doesn't go up as much as it would otherwise like to, leaving room for Iraq. They did it after the Iran-Iraq War. They did it after Kuwait came back.

MR. PUGLIARESI: What the mid-level guys at the ministry are telling us is, "Don't even phone us till we get to 4 to 5 mb/d. We are way below quota. If you've got a problem, you work it out, but we're on this track." When they get above that, I think you get into the whole question of OPEC dynamics. It could probably keep Congressional Research Service (CRS) busy for at least a couple years.

MR. KERN: That's why you have your $20 lower price; there's a little more competition.

MR. MOHAMEDI: OPEC countries now have varying threshold prices — the price they need to balance their external account. The king has said that a fair price for both consumers and producers is about $75. And, essentially, in the last year, they achieved that. That's because Saudi Arabia has been able to swing production in OPEC, and it's gotten, to a certain extent, especially after 2008, some cooperation from all the OPEC states. OPEC, in general, is aligned around that price. There is no real disagreement on that. Having said that, there are some countries that need $75 more than others. The Saudis need about $50. Venezuela and Iran need a little bit higher, about $75 plus. But, in general, they've been able to manage at that level.

You're absolutely right that the coming of Iraqi oil will pressure the system. Right now, most excess capacity — which is how the Saudis manage production and how OPEC manages the supply issue — is in Saudi Arabia. So the Saudis cut back; they can manage this market almost by e-mail. But in the future, it's going to take a lot more negotiation between the Iraqis and the Saudis. Now, as Nat said, the Iraqis have said: "Forget about the 1980s, when you used to always say that our quota will be on parity with the Iranians'." No more. We're now talking about parity with the Saudis. That's the new sort of buzz. But Iraq has also said, "If we get about 6 mb/d, then that will pretty much be satisfactory." So I think that's what we're headed towards. But the rise from 2 mb/d to 6 and OPEC's ability to manage that will be a complicated affair. It'll give us OPEC watchers another lease on life.

Q: I'd also like to focus my question on Iraq. A lot's been said about the massive production potential and the portfolio of risks, but where are the oil companies? Are they on the ground? Are they experiencing any problems, particularly with regard to the security situation?

MR. PUGLIARESI: You can actually track the conference calls or look at some of the specific sites. BP is in the Rumailah field; they have shared quite a bit of information. They're on the ground. The seismic crews were already there before the auctions were even finished. The down-home services are being contracted for — Nat was telling me that Exxon has just reported that they have concluded a deal on the water for some of the enhanced oil recovery. The service companies are there in a very big way. As I said, Schlumberger's building a very large camp. Halliburton is there. We always say that we never trust any of these deals that you hear about until you see someone breaking ground. Well, they are breaking ground. There are very serious efforts underway right now.

DR. MATTAIR: And they've been on the ground for a while, because they were providing services even before the auctions.

MR. PUGLIARESI: Absolutely.

Q: Thank you all for the wonderful presentations, but there was no substantive discussion of Iran's ability and potential to produce. I have one question for each of the speakers. Nat started sugar-coating the opportunities for U.S. companies in Saudi Arabia and the region as a whole, but since the Arab oil embargo of the '70s, the entire region has been closed to outsiders, at least upstream, particularly for oil. What he said reminded me of the early '70s. The situation in Saudi Arabia, in particular, is like what we saw in Iran. Don't you think the Saudis are actually contributing more to the region's instability than to its stability, at least in the last few years? King Abdullah, before he became king, was really a more effective leader than he is now. He tried to resolve issues with neighboring countries. Now it's exactly the opposite. There are problems with the United Arab Emirates, with Yemen, with Iran and so on.

For Fareed, you talked about Qatar, but Qatar really didn't have much choice. They had to go the liquefaction route because they really didn't have an outlet. They didn't have domestic consumption needs or a regional need for gas; their options were limited. But the problem is the security of the export. If anything happens to the Strait of Hormuz, pure shock. Oil-producing countries may have other options, but not Qatar. The other thing is the environmental issue. Qatar is probably the most polluted place anywhere in the region, yet they're producing gas. My question is on the excess capacity you mentioned the Saudis have developed in the last few years that's supposed to last for decades. How do you explain that? What if the optimism of Iraq doesn't materialize? I understand they have to pay an insurance premium just to make sure that the market is stable. And Iraq wasn't really the first country that opened up. It was Iran in the '90s with the buy-back of the communities that came up, and I honestly think that buy-back offers a much better return. I'm not sure if the companies realize the political risk. If you're counting on a maximum rate of return of 15 percent, that's the minimum that Iran guarantees. This one is not guaranteed.

MR. PUGLIARESI: We don't know what the rate of return is on these deals. We know what the companies have told us they think they got. We don't know what they are yet.

Q: That's assuming that everyone produces the volumes that they said they will. Mr. Shahristani, not long ago, said that what we are agreeing to is creating a capacity for incurring profit. Investors have to be crazy to make huge investments for Mr. Shahristani.

Jean-Francois, you talk about the external threat from Iran in the region, but don't you think that the hardliners in Saudi Arabia are more of a threat to the authorities in Saudi Arabia than Iran or any outside party?

MR. PUGLIARESI: Let me quickly respond on the buy-back. I'm familiar with two companies that engaged in very intense negotiations, one from Japan and one from a Scandinavian country. In both cases, the Iranian bureaucracy sort of chewed them up. They could not get to the point where they felt the deal was workable. A colleague of mine, Fereidun Fesharaki, says the Iranians do a much better job of imposing sanctions than the U.S government. I don't think these companies were necessarily worried about U.S. sanctions. They couldn't get the deal to work, partly because a lot of the talent that used to be in the oil ministry has been purged. With the Revolutionary Guard political appointments, etc., they don't have the kind of expertise where people could get comfortable with these deals.

Q: They did that deal with Total that you mentioned, and it was very effective.

MR. PUGLIARESI: You just need to see what's happening in Iraq. It's got these other problems but on the contracting terms, it's a completely different scale. But I take your point — that it has been done before.

MR. KERN: Again, you're correct: We've neglected Iran or belittled it. That's the fashion these days in this town.

DR. SEZNEC: One of the reasons the Saudi leadership is pushing the country so hard to move forward is to bypass the religious establishment and totally marginalize them. To a great extent, they have succeeded. We'll see how that continues. I've had talks with various international oil companies on these matters, and I totally agree with Lou. They tell me it's impossible to negotiate in Iran. You negotiate a deal, and as soon as you have a negotiation, it starts again and again and again — so it is never finalized. On top of it, you have all the political pressure. Total had a deal. Then Total left the North Dome because the French government told them to do so. A couple of days ago one of my Saudi friends was telling me what negotiating with the Iranians is like: 'What's mine is mine, and what's yours is negotiable." Every company, including that Scandinavian company you mentioned, just finds it very difficult to finalize anything. That Scandinavian company did finalize a contract. They are actually finishing it this year in the North Dome. But they don't want to do any more.

MR. MOHAMEDI: On excess capacity, the Saudis had a big debate in the early part of the 2000s on whether they should spend money on increasing their capacity. Ali Naimi, the oil minister, used to say, "You have insecurity of supply, we have insecurity of demand — we're going to put in billions of dollars, and then suddenly the demand is going to disappear." His prediction was borne out: in 2008, demand did collapse because of the global financial and economic crisis.

But they felt that they needed to put the investment in, to maintain Saudi Arabia's strategic position in the world and especially now with this emerging pan-Asian group as they became more and more important to Asia. So they've decided to hold it. When Iraq returns, it's going to definitely stress the system, and we're going to go back Baghdad-Riyadh negotiations over price. That's where the price, at least in the physical markets, is going to be found.

DR. MATTAIR: The questioner said that we've neglected Iran, and that there are a lot of contract disputes. The Turks have a deal to take gas from Iran, and they have gone to court because they're not getting the volume they were promised; there are disputes over the price of the gas that Iran has contracted to send to Pakistan. It is their reputation that they are very, very difficult to deal with. But on top of that, obviously, there are no opportunities for American firms in Iran because it's against the law to do business in Iran. Although the opportunities are theoretically there, because Iran is so rich in oil and gas, it's just a closed market to us. Other people have entered the arena, depriving us of business — the Chinese, Russians and Europeans — but even that is starting to contract. The sanctions that are contemplated by Congress, and the sanctions that are already in place in the executive orders that go back to President Bush's first years after 9/11, prohibit dealings with the banks and other firms. Let's say a European company needs financing for a project and is running into a problem. Banks are being fined by the U.S government for dealings with Iran; banks are being blacklisted. The whole possibility of financing these deals is very, very difficult, even for European firms now.

So you see firms leaving Iran. You see firms that have contracts to develop offshore gas fields, like Total, leaving. There are still some there because their contracts were signed a long time ago, and the work is already ongoing. ENI is still offshore; so is Total. But, in terms of new contracts, they are against the law, and it's really stymieing European opportunities there as well. Of course, that leaves the Chinese and the Russians, and that's why they're going to oppose tough sanctions in the Security Council, and that's why they're going to even oppose the kinds of tough sanctions that Obama would orchestrate with a coalition of the willing.

Q: With the rise of Iraqi oil, if they meet their quota over the next two years, could that diminish the political influence that Iran and Venezuela exert with Russia and China through their crude on the market? I'm wondering about the politics of the oil reserves of these two countries and how you think the rise of Iraqi will affect it.

MR. MOHAMEDI: This concept of politicization of oil by the OPEC countries or Venezuela is a bit of a joke. The United States has overthrown governments because of oil. Politics and oil have always gone together. The economic geopolitical power of many of these governments is greatly exaggerated. It's good, sensational stuff, but it's really not what happens in the markets. Chavez makes good copy; he's glamorous or sensational. But, it doesn't really matter to the oil market. In fact, the mismanagement by some of these countries is actually helping other oil producers that are, at times, helping the oil market diversify away from some of these guys. In fact, the problem of Iran is that it has excluded itself by the mismanagement of its oil sector from the world oil markets, and it's becoming increasingly irrelevant. That's why the policies of these countries are actually hurting themselves rather than enhancing their political power.

MR. PUGLIARESI: I agree. We gave a presentation about a year ago to one of those agencies with a funny three-letter name. It was on Gazprom. We said, "We think you have it all wrong. We think Gazprom does not have all this power." In fact, the pricing leverage is moving against them. This is a market issue because of the Shell gas revolution. They literally threw us out of the room: "You can't be serious, Lou." A month ago, they called us back and said, "Can we go over that briefing again?" And I said, "The way to think about Iraq is, it has to do with the price." Political leverage is going to drop if the price drops. The de-linking of gas is more than just a de-linking. It means that the assets, far away from the markets that the Russians and the Central Asians sit on, have declined dramatically in value. Now they're in a position where they have to change their whole strategy. That's where the political risk comes in.

DR. SEZNEC: Everybody says that the Chinese are dealing a lot with Iran. There's truth to that. The fact is, however, I think there are 21 or 22 oil contracts signed between Iraq and China, but not a single one has produced a drop of oil yet. It's always "next week, we will start producing." It's the same with the Russians. I think the Chinese are playing it very smart, in the sense that they want to be the friends of Iran. They're the only ones dealing and signing with Iran, but they're making sure not to produce anything, so as not to annoy the Saudis, who are by far their largest supplier of oil and a very large market for their own goods.

MR. KERN: China's biggest contract with Iran is for LNG. Iran doesn't make LNG.

DR. SEZNEC: That's exactly true. There is no LNG in Iran, and there won't be any anytime soon, because it costs so much money to start.

Q: There's a growing drumbeat in certain circles in the United States and Britain for military strikes against Iran after a further tightening of sanctions. How do the GCC countries view this drumbeat? Do they think that military strikes can be put off? Do they think the sanctions can be maintained indefinitely?

DR. SEZNEC: As someone once said, those who know don't tell, and those who tell don't know — so I will tell. I think there's been an effort by the administration to convince the users of oil that Saudi Arabia will make up for the 2.3-2.4 mb/d that are exported by Iran — Iran produces 3.8. The Saudis have been very, very strong in telling the U.S. government that they're opposed to a military strike. If we ignore their opinion and still bomb, I think they will not produce the extra 2.4 million. They will just let price of oil go to $200 a barrel, and they'll be sorry all the way to the bank. I think that's what's going to happen. I think they are so afraid that it will stop the evolution of their society that they will take that kind of action. What else can they do?

Q: If Iran becomes a nuclear power, what will be the impact of that in the business environment, and in the media? Would that stop the local and international investment in the region and create other problems? Second, some people say that by the mid-twenty-first century, there will be another energy crisis in the world, due to the increased demand and consumption, particularly in the growing economies, and decreased supplies. Do you believe that?

MR. KERN: It's hard to know exactly what Iran would do if it were a nuclear power, a year or so out. Certainly, if I were producing gas and got it from a reservoir that is shared with Iran that Iran is not able to exploit, I would expect to get a call from the Iranians saying, "we want you to share a little of these revenues you're getting from our joint field." I'm not sure how the Qataris would respond. But I think there'd be a number of areas where the Iranian government would assert what it considers to be its legitimate rights.

MR. PUGLIARESI: I'd like to give you an alternative framework to think about this transition to fields of the future. What happens with peak oil or this running-out-of-oil thinking is that you have to prove a negative. It's hard. There have been about 5 million holes drilled in the world, 4 million in North America. Almost all of those have been in two basins: the San Joaquin and the Permian Basin. We did a study where we went back and said, how good is the Hubbard mechanism, which is the standard of what we were looking for? How good is it at forecasting peak oil from these two basins? It's a very interesting report — you can look at the website — and we updated it for every 12-year period, 15-year period. It turns out, in the final period, the year 2000, where we had updated it from the '60s and reforecasted, it missed by an order of magnitude. So there's a lot of uncertainly on how much oil and gas is out there.

But there's probably a backstop price of oil. There's probably a price where you can't drive it any higher because conservation or alternative fuels are so prevalent. So the question is, how are we going to approach that backstop, and what are the alternative technologies going to be? We really don't know.

I'm not convinced DOE can pick the winners and losers. I think that shale gas is a great story — took place largely on private land, people had an idea, could move it from one area to the next. And, if the gas reserves are much higher than we think, gas-to-liquids may turn out to be the backstop price way before we start running out of petroleum. If you make an array of all the problems you have to worry about in the world, for us, that's not one of them.

MR. KERN: There are some arguments that we hit the backstop price in '08. We got peak demand.

Q: What might take place for those firms operating in Kurdistan that have made it through the mess of the KRG [Kurdistan Regional Government] or prior to and outside the Baghdad process? What sort of settlement might you expect between Erbil and Baghdad?

MR. KERN: If the Iraqi government is ever more transparent about the terms that they reached with the big oil companies in the main parts of Iraq, the KRG has already published the terms of its contracts, and you would want to see whether the Kurds got as good a deal as the Iraqi government did. I think it's probably going to be on a par, in which case the Iraqi government — Baghdad — is sitting there, preventing exports from which it derives 83 percent of the revenue because of the revenue-sharing. The first year, if they wanted to meet the terms of those contracts, they'd have to turn over about 50 percent for cost recovery. But, that's life. I think Iraq would benefit from opening up export outlets for Kurdish oil.

MR. PUGLIARESI: The recent provision — where there's really no legal basis that the revenues will be distributed provincially on a per-capita basis — seems to be softening the Kurdish position a little bit. The interesting thing is that there's a famous contracting expert by the name of Pedro van Meurs, who takes a look at these contracts and says, this provision is going to cost too much, accelerates cost recovery; this one's corrupting. He reviewed both the Kurdish and the Iraqi central-government contracts, and as far as we can tell, most of his suggestions were taken in both cases.

MR. KERN: At some point in his review he said the Kurds were getting a better deal, but the Iraqis changed it.

DR. SEZNEC: I think it will be interesting to see what happens with the political negotiations between the Kurds and the various parties. I'm sure that's an issue that we'll try to negotiate. The Kurds would like to keep complete control of their oil, and I'm sure the Ministry of Oil in Iraq wants to somehow, sooner or later, get hold of those contracts.

MR. KERN: It's complete control, but they are willing to give 83 percent of the revenues after cost recovery.

DR. SEZNEC: That is true. The Kurds attended a meeting in London three or four weeks ago where they were discussing these issues. As you mentioned, they softened their position quite substantially in the past few weeks to sort of get back into the game. I think they felt that the negotiations by Shahristani were really very good for the whole nation, probably better than they themselves could obtain with the various companies — and they're probably being pushed by the companies, Sinopec in particular, to get back into the good graces of the Iraqis so that Sinopec can end up working in Iraq itself as well. We will probably see the two sides getting back together and sooner or later, getting little companies like DNO [a Norwegian oil company] and Sinopec and so on back into the good graces of Iraq.

Q: I hear different ideas about the political implications: on the one hand, you hear that the dynasties are basically technocratic capitalists now so it doesn't matter who rules or how that happens. On the other hand, you hear that King Abdullah of Jordan became king by a fluke; it was supposed to be his uncle. Sultan Qaboos has no heirs; Saudi

Arabia's got all these princes. Yet we seem to act as though there is a stability that's not driven by the dynastic nature of the ruling families.

DR. SEZNEC: I'd like to reiterate what I said earlier. We tend to see the decisions and the elites in the Gulf in particular as being driven by the royal families. I strongly disagree with that. Maybe in Dubai and Abu Dhabi, but in Saudi Arabia, the state is run by the civil service. The princes do matter an enormous amount. They make final decisions, and the civil service cannot work without approval from certain princes. But King Abdullah in Saudi Arabia is really the decider of last resort. Every decision is made by consensus at that level, not only among the 10-15 senior princes and the 10-15 senior civil servants. But I think it's time we realize that the technocratic nature of the state, and what they want to achieve, is really primary to the future of the region.

Q: Even in the case of succession issues, when the king dies, that doesn't create power vacuum?

DR. SEZNEC: Certainly in Saudi Arabia there is no succession issue. The succession is very well-organized at this time, and the new Bayah Committee was built by Abdullah to remove Sultan from power eventually and to go to a more technocratic prince. Whether it's Salman or Khalid al-Faisal, I think we'll see in the very near future, unfortunately. But it is very well-defined. All the senior members of the royal family have a say in these matters, but it is an extremely stable system, at this point. I can't say that about the other countries of the Gulf, by the way, not about Qatar or the UAE.

Q: Could I get your interpretation of the Iraqi government's decision to shift soft loans into single, nonreversible contracting fees for the oil-service deals it just did?

MR. KERN: There was a legal issue with the loans. Parliament would have to approve it if it was a loan, but it doesn't matter if it's just a payment.

DR. MATTAIR: To what extent are the decisions of these producers strictly economic, and how much would their dissatisfaction with American foreign policy influence any of these decisions or their decisions about how to invest the revenue?

MR. KERN: I talked about how, for 13 years, it was a political decision that the Saudi government ordered Saudi Aramco to be the number-one or number-two supplier to the United States. It missed that, I think, in only one year. But that's difficult. They're far away, they're competing against Canada. It was a purely political decision by the king, then crown prince, after 2003 to stop favoring the United States. Very straightforward.

Q: In Qatar, joined fields — North Dome field, or the old North Field, as they call it now — were discovered in the early '70s by Shell. In fact, the first project, in 1974, was an evaluation of a scrapped project. Iran had no idea that the field would extend into Iranian territory. It was after the Iran-Iraq War that Iran actually made the discovery or found out that the field extended into Iranian oil. The field is only one-third on the Iranian side and two-thirds on the Qatari side. Iran has developed 10 of 28 phases of the project.

MR. KERN: So are they producing one-third of the gas there?

Q: It's actually producing considerably from that field, and the ratio is very close to what it's supposed to be, hopefully, area-wise. As to actual Chinese involvement in Saudi Arabian gas, there were some major contracts several years ago for exploration in the Rub al Khali area, the Empty Quarter. China was one of four major operators there, and they didn't find anything.

MR. KERN: They're very marginal areas.

Q: Shell had a huge discovery there. So the area is not really empty as far as hydrocarbons are concerned. The potential is great, and Shell proved that to be the case. These things take time. China's involvement in Iran is real, and they are involved in the hydrocarbon sector of the economy, in refining and pipelines and many other areas. They may not have production for oil, but the commitment is there, and they're making a major statement.

MR. KERN: They're very active, no question about that. I think the United States often gets in a high fever pitch about Chinese contracts with Iran, and then it would look at the $25 billion contract for LNG over the years. Countries sign these kind of things and it's kind of futuristic. They're like things Goldman Sachs sells: they don't really exist. But there's a substantial Chinese presence; there's no question about that. These are strong ties. Some of these contracts are window-dressing; some are real.

Q: In Qatar, it's the same thing: They've been investing for years.

MR. KERN: I'm reassured that the Iranians don't have a valid reason to ask Qatar to pay for stealing their gas.

Q: I'm curious if anybody knows how much it costs Saudi Arabia to maintain all that spare capacity.

MR. PUGLIARESI: It's expensive but affordable. It's a big number.