THE BROOKINGS INSTITUTION

COMPETITIVENESS IN A CHANGING WORLD OIL LANDSCAPE:

Washington, D.C.

Monday, September 27, 2010

ANDERSON COURT REPORTING
706 Duke Street, Suite 100
Alexandria, VA 22314
Phone (703) 519-7180 Fax (703) 519-7190

PARTICIPANTS:

Introduction:

WILLIAM ANTHOLIS
Managing Director
The Brookings Institution

DANIEL YERGIN
Chairman
IHS Cambridge Energy Research Associates

Opening Remarks:

DAVID HOBBS
Chief Energy Strategist
IHS Cambridge Energy Research Associates

Panelists:

LOU PUGLIARESI
President
Energy Policy Research Foundation Inc.

KEVIN BOOK
Managing Director, Research
Clear view Energy Partners LLC

GRANT ALDONAS
Principal Managing Director
Split Rock International, Inc.

* * * * *

P R O C E D I N G S

MR. ANTHOLIS: Today's session connects two of our institution's priorities. For those of you who don't know Brookings very well, we are five research programs under one roof -- foreign policy studies, global economy and development, governance studies, metropolitan studies, and economic studies. And the way that we like to talk about all of Brookings in addition to our core values is through a number of institution-wide priorities. Two of those issues are front and center in today's discussion. One of them is energy and climate policy, which has been a big part of our life here for a long time and has been a sustaining priority. And the second is something that we've called growth through innovation, which really focuses on core competitiveness issues and the underpinnings of competitiveness, everything from tax policy to investments, to technology and the like.

Today we are delighted to have IHS Cambridge Energy Research Associates -- IHS CERA -- making a presentation on how two of these priorities are

connected to one another. In particular on the growth and innovation front, there has been a great focus on two connected strands. One of those is tax policy -- investments, tax cuts, and tax increases -- and getting the right set of tax tools connected to a longer term concern about the second strand, which is deficit reduction, getting the federal budget in check which has emerged as a political theme, if not an economic one.

On the energy policy side, there are also two strands that are intertwined. One is a concern about liquid fuels which has been in many cases the lead concern in energy policy in the public mind going back for probably a generation to the oil shocks of the ’70s. Two challenges are to get the right set of policies in place to address liquid fuels, which are largely focused on transportation in the United States while also addressing solid fuels, which largely, along with natural gas and nuclear fuel, meet industrial and home and office energy use. And how these two strands intertwine and/or compete with one

another is also an important strand.

So we have all of these strands out there and we are delighted today to have our friends for CERA make a presentation on how some of these come together. To introduce that I'm going to call up Brookings' trustee and good friend of the institution and also the co-founder of IHS CERA, Dan Yergin. The full bios are available in the back. I won't go into them in great detail. But we're delighted to have Dan who does so many things so well.

MR. YERGIN: Thank you very much, Bill. Bill Antholis is the managing director of Brookings, and I have to say as a trustee it's an honor to be part of this extraordinary institution and also to be part of the Energy Security roundtable which fits in very much with the priorities that Bill described. Charlie Ebinger, who is the head of the Energy Security program isn't here today. He's recovering from an eye operation, but it's a very vibrant program.

We do have a very lively and timely

discussion this morning. We're going to be hearing from Grant Aldonas, who was the Undersecretary of Commerce, Lou Pugliaresi and Kevin Book in a few minutes. But in a moment I will introduce my colleague, David Hobbs, who will be making the first presentation.

My job is to set the framework for this morning. I think we need to be reminded again and again of the reality that a growing world economy requires energy. How much and what kind is subject to debate; in fact, a vigorous debate, a hot debate, but it also means that it needs much, much investment to obtain it.

We have to start with the reality of demand. It's quite striking to realize that since 1990, the world is using 40 percent more energy than it did just 20 years ago. What an extraordinary growth. We've just completed our new scenarios at CERA and we see that roughly the same kind of growth or slightly less will occur over the next 20 years, but over a much larger demand base. This means that it is a real

challenge to ensure that the energy that a growing world economy needs is there.

Eighty per cent of the energy utilization in the world today is comprised of oil, natural gas, and coal. In our new scenarios we have trouble seeing how over the next 20 years the contribution of these fuels will be much than 70 percent given the long lead times necessary to bring on alternative sources of energy. But demand will grow differently in diverse parts of the world. In the United States, we have reached peak oil demand and we'll probably see a bump up as we come out of the economic downturn, before renewing our slow sloping decline, while still using a very large amount of energy.

At the same time, we know that technology since the beginning of the century has unlocked substantial resources and our domestic resource position is much stronger than we thought. And if we ask ourselves what's the most important energy innovation since the beginning of the 21st century we would say that it's what's happened with shale gas in

terms of the volumes we now know are available. And we see similar opportunities for oil.

But what that means is that our economy is going to continue to consume substantial amounts of oil, world demand will continue to grow tracking growth in the emerging markets, though not necessarily in a one-to-one ratio. So the message is that substantial new supplies will have to be developed around the world. A second message is that a stable world oil market, whether we're importing 30 or 50 or 60 percent of our oil, is very important to our economy.

At IHS CERA, we spend a lot of time trying to understand the changes in the world oil industry. One very obvious one is the rise of what's been called the INOCs --the International-National Oil Companies -- which have become a much bigger part of the competitive landscape. In focusing on that global competitive landscape, we see a relative shrinking position for U.S. companies in the global oil market. A further observation is that the relative position of

the U.S. companies is shrinking relative not only to the international-national oil companies, but also to the European traditional international oil companies.

Now, this is not a zero sum game where we have to see it as a sort of "game of nations" in terms of supplies. In fact, from a security point of view it's better to see international oil on a commercial basis rather than a clash of nations. But still, it is significant if the relative position of U.S. companies shrinks in the global market because that means it affects the job picture in the United States, it affects economic value in the United States, and it ultimately affects revenues to the U.S. Government.

As researchers we want to understand why this historic shift is happening. Traditionally one looks at the fiscal regime in place in the host countries. That's what people analyze. But we asked ourselves a question, a research question, what about the fiscal system in the home countries? That is, the countries that various oil companies come from. How would policies there affect the ability to bid for

licenses because of the kind of hurdle rates and returns that companies require?

We set out to analyze this question, building a very extensive database on the fiscal systems in the home countries. That effort was led by my colleague, David Hobbs, who is the chief energy strategist at IHS CERA. He worked on this very intensively in close coordination with Deloitte, the consulting and tax firm, to build a database to understand it, to analyze it, and to put it into context. The result is a paper called *Fiscal Fitness which found* that there is striking difference in the home country taxation rates of different countries. We looked at 10 different nations that affected the returns and analyzed how these policies affected the hurdle rate and the impact on what companies are able to bid.

Now, as we're doing this work, of course, future tax policy is under intense debate in a number of countries. There are proposals to change the tax laws in ways that our analysis showed, would make U.S. companies less competitive. As we furthered our

research we became aware that the reason for this impact is based upon a misunderstanding of a century-old pattern of taxation by the U.S. Government in terms of considering how income should be taxed that is earned internationally. The proposed changes are also based upon a misunderstanding of the difference between a royalty and a tax rate as well as a serious misreading and even a distortion of a book on the oil industry called *The Prize which I wrote and which appears* around page 730. Needless to say I was more than a little surprised and taken aback when I saw how those pages were being used from a book that I know very well.

I think it is also based upon a failure to understand that oil exporting countries tend to construct their tax regimes differently from the United States. Consequently the U.S. model for taxation is not a global model for all countries because their economies are so different.

Whether intended or not, tax policy can end up being de facto energy policy even if it is not

described as such. Taxation systems don't exist in a vacuum but are influenced by events in an increasingly competitive world. And so our conclusion is that proposals that are on the table would make U.S. companies even less competitive than they are today and that this would have consequences that would accelerate the relative shrinking position of U.S. companies internationally. All this, in turn, would affect the international competitiveness of the United States and its energy security.

This is the conclusion that we came to in writing *Fiscal Fitness* and the soundness or not of its premise will be one of the subjects of this morning's discussion. To understand our analysis and to see how we came to our conclusions, I'd like to turn the podium over to my colleague, David Hobbs.

MR. HOBBS: Today I am going to address the confluence of two things that really piqued our interest. The first question is why is the U.S. share of global oil activity is shrinking in relative, and perhaps in absolute terms. This was the first issue we

examined. The issue is slightly obscured by the fact that companies domiciled in a country would expect, to capture home markets especially if they are national oil companies.

To test this thesis we looked at how companies fare outside their own countries. This was our kicking off point. What was perplexing was the discovery that U.S. and European or Eastern Hemisphere companies for lack of a better term or non-U.S.oil companies had all seen declines in market share since the rise of National Oil Companies (NOCs) in the early ’70s, and the greater assertion of sovereign rights. However, the non-U.S. companies had re-grown to a much greater extent than the U.S.-based companies. As we thought about what could cause that difference of performance. We decided it could be one of a range of things. Was it the motivations and strategic objectives of companies? Maybe it was just the European companies had set out with more aggressive growth targets and had done what it took to grow. Maybe they are better at executing projects or perhaps

they received more political support from their home governments or some privileged access to capital. Or maybe they just had a higher oil price forecast. Who knew?

As we looked at a number of those different factors, it became increasingly hard to argue that any factor other than the degree of political support or fiscal restraints accounted for the difference. But the one thing that stuck out in both the home and host country was the way in which the integrated fiscal regimes affected each other. So two critical issues were not only the structure of taxation in the host country, but also how was repatriated income taxed if reinvested at home? I describe this phenomenon as the "export tax", what is withheld by the host country before it can be taken out and what has to be paid to the home country to bring the profits back home. What we saw was that while some countries provide offsets for repatriated income on which taxes have already been paid to the foreign country, others do not effectively engaging in double taxation. In other

countries there is no taxation on repatriated income while in others there is some kind of levy but not to the same extent as occurs in the U.S.

For the United States peer group, we looked at the largest U.S.-based companies, some of which were consolidated through the late ‘90s. They nonetheless comprise a representative group that accounted in the 1970s for the vast majority of U.S.-based company production--ExxonMobil, Chevron, ConocoPhillips, and Occidental.

While the figures do not look too bad in terms of production, that’s a very backward looking measure of what’s actually going on. For example, when we look at what’s going on in a more forward looking way in terms of the acreage that people hold as an indication of their future activity -- and the number of exploration wells that they operate the reduction becomes even starker.

This approach led us to examine the fiscal interactions as a primary cause of what was different

between the non-U.S. and the U.S.-based IOCs, the investor owned companies. Clearly you could make cases for different drivers for the national oil companies, even in their emergent form as International National Oil Companies (INOCs).

Nonetheless we asked what t really drives relative performance long-term in the upstream industry. And we decided that it is the acquisition of acreage. It is here that one finds the high point of competition. Once you own acreage, you can pretty much do what you want with it. No one, short of a hostile bid can operate on it. So effectively, the competition is over at the point of acquisition. It then becomes a cooperation, partly because governments try to encourage companies to share infrastructure, to share the logistics that support the lowest possible cost of activity, because that leads to the highest possible taxable income..

This realization led us to examine what are the mechanisms by which companies acquire acreage and when they acquire it from governments there are two

main mechanisms. One is simply how much cash do you bid for it. In the U.S., for example, you have a fiscal regime where the allocation of acreage is determined almost entirely by what is the cash bid that you can offer provided it reaches some kind of threshold valuation. In other countries you have commitments to work programs or assessments of the technical capability. But in the end it comes down to either what's the present value you can recognize in the asset and that you're prepared to bid to the mineral rights owner or what's the rate of return that you can earn from the asset that supports your commitment to capital going forward.

If I compare the present value of an asset in the host country to the present value once I have repatriated the cash flows back to my home country, what you can see is some combinations are punitive in that they reduce the present value by more than 80 percent. So if it's worth $100 to me when I don't have to repatriate the income, then once I've repatriated, in the case of Canada, for example and ,

for all those countries in Central Asia, I recognize less than or approximately half of the value. So what was worth $100 in the host country is worth about $50 once I get the income back in Canada.

If I think about what this means for Canadian companies along the competitive axis, these are 10 countries that are home to the largest oil international oil companies. What the analysis shows is that if I'm a Canadian company, I have a competitive advantage compared to anyone else in activity in Libya, in Iraq, in Qatar, and in Canada. You would expect the tax system to be especially kind. Interestingly, Norway penalizes Norwegian companies operating in Norway to exactly the same extent as anyone else. So they pay withholding taxes within Norway just as if they were a foreign company. So Norway is completely nondiscriminatory.

One of the interesting countries is France where you're better off being a French company operating in the United States than an American company operating in the United States for a variety

of complex, fiscal reasons. We were able to understand e the first part, the analysis of the host country but we worked with Deloitte to better seethe non-intuitive complexities of the interaction back to the home country. Together we examined many home countries tax codes. Once we had the analytic framework established in a large database of those interactions it became relatively easy to extend the analysis.

When we look at the rates of return, similarly we see a reduction in the number of points of return. India is an interesting case because it does not provide a credit for taxes paid internationally and then they tax you again at home. That is the reason that India ranks even worse than the United States on almost all measures.
While at first blanche these differences may not seem profound affecting rates of return by only 1 or 2 percentage points, over the life of an asset, a 1 percent reduction in the rate of return or in the return on your capital is about 50 percent of the

value of an asset. So it's actually quite substantial.

Where we ended up was being able to compare what we call "facts and circumstances" against the safe harbor provision. "Facts and circumstances" provide a credit wherever the foreign tax paid meets the definition of what is a tax. The safe harbor, in general terms says, we're not going to allow treatment of foreign taxes to be treated as tax unless they are at the rate of the general corporation tax. As Dan mentioned, that makes the assumption that the entire world looks like the United States and chooses to construct its fiscal regime in exactly the same way.

As it turns out, this is a similar measure to the proposals coming from the administration today, although there are some important differences. What it shows is that by any measure, and if it weren't for this particular advantage of French companies operating in the United States, the United States would rank even below France. In addition when we move to the safe harbor definition, on both rate of

return and on the value that a company can bid, the United States finds itself at the bottom of the competitive pile. Clearly this has consequences, not least in terms of employment that tracks back to the United States, both in those companies, but in terms of the ancillary impact on service companies. U.S. companies tend to be better customers of U.S. service providers. It also makes an enormous difference long-term in terms of the amount of taxable income that is repatriated. If you reduce the activities of U.S. companies internationally, then there must be long term reduction in the income that can be repatriated.

Interestingly, when we think in terms of political support, it is often the oil and gas industry or the resources industry generally that is a leader in terms of entry into new countries and in terms of reestablishing diplomatic ties. The resources industry tends to be in the vanguard.

We should also note that countries in which hydrocarbon exports loom large in their GDP often choose to construct their fiscal and tax systems very

differently.

Others will speak more eloquently, of the consequences, but our analysis essentially showed that today there is an embedded competitive disadvantage for U.S.-based resource companies. With further changes to US tax policy tomorrow there may be an even greater competitive disadvantage embedded into the system. It's something that can not be ignored and dismissed without considering what the consequences might be.

MR. ANTHOLIS: Let me quickly introduce our speakers again.

Grant Aldonas was Undersecretary of Commerce for International Trade. He has worked in a number of different capacities on this and related issues and is a terrific friend of Brookings and we're delighted to have him back.

To his right is Lou Pugliaresi. Lou has served in a number of posts in government and outside of government, including at the National Security

Council, State Department, Energy Departments, Interior, and EPA. I guess that's a sort of grand slam of agencies dealing with oil and gas and related industries and we're delighted to have Lou with us today. Lou is now president of the Energy Policy Research Foundation.

And to David's right is Kevin Book, who is at Clear view Energy Partners. And as Kevin and I were talking about today, Kevin, in addition to being an energy analyst, is on the cutting edge by driving a hybrid Highlander.

With that, I will turn over the discussion to e Dan to kick it off with some framing questions and comments.

MR. YERGIN: Why don't we start with Grant?

MR. ALDONAS: To pick up on a comment of Bill's and to set the stage for the discussion, we are not only looking at the interplay of fiscal policy choices and energy policy choices in this instance, but we're looking at a context of a global economy that's increasingly competitive and one where we face

an increasing pace of accelerating and economic change. I think harkening back to the ’70s and ’80s picture as Dan did eloquently in his introduction is a useful benchmark against which to judge where we are as were David’s slides as well.

Within that context I’m going to pick up on tax points and illustrate why we are where we are today. The United States is very unusual in its approach to taxation in that it taxes all of its citizens, including corporations on a worldwide basis, which is unusual in terms of fiscal policy. Most countries adopt a territorial approach. Early on Congress realized it had to address the competitive implications of taxing income on a worldwide basis and introduced the foreign tax credit mechanism back in 1918. So like within two years of the original enactment of the Internal Revenue Code, Congress recognized the damaging effect of double taxation on the competitiveness of U.S. enterprises.

When you think about the measure of the early 20th century and the 21st century, we now seem

to be moving at a completely retrograde motion in introducing additional burdens on U.S. players in global markets. I am referring a to particular instance where the administration has proposed decreasing the availability of the foreign tax credit exposing more of the income of U.S. oil and gas companies to double taxation. While proposed as part of broader change in tax strategies I believe such proposal is inconsistent with enhancing the competitiveness of American companies. I'm thinking about the proposals that would limit deferral, for example, limiting the ability of all U.S. companies, not just energy companies, to chase the only economic growth that exists in the world economy, virtually all of which exist outside our borders. It doesn't seem shrewd economic policy, much less fiscal policy, to put ourselves in such a situation.

That kind of tax policy has long existed. I know my own experience practicing tax law in the 1980s and 1990s was that U.S. tax policies have always been adopted in a context that largely ignored a lot of

what was going on in the rest of the global economy. However the reality is we no longer can afford to do so. We're now in a situation where, as David's slides illustrated, the role of American companies, and indeed independent oil companies, is much, much lower than the state-owned sector in this particular industry. They forge a vital link to this all important resource which I'm sure Lou will talk more about. So we need to be thinking consciously about what the unintended consequences are of making the wrong fiscal policy choice.

Just to throw out a little bit of background, the major issue here relates to the fact that the energy companies are what are known as "dual capacity taxpayers". What that means is that they make two different kinds of payments in two different capacities to a foreign government. One as a customer of the government; the other is subject to the sovereign taxing power of a government. The proposal by the administration ignores this distinction and treats all of the payments that the U.S. companies

make in effect above the generally applicable level of tax in a country as royalties. It creates an irrefutable presumption that all of that constitutes a royalty and therefore is not creditable against the tax liability. This results in the exposure of a larger share of the company's income to double taxation.

There's also interestingly a special rule enacted in 1970s era that limits the use by U.S. oil companies of the tax credit even where they can prove that the payments are income taxes rather than royalties. So in one sense the U.S.-based oil and gas companies are already at a disadvantage relative to any other U.S. industry because of the limitations already imposed inside the code. That's true even with respect to alternative energy producers which can make full use of the foreign tax credit.

So there's a number of tax policy critiques--thinking about Bill's sort of interplay-- that would apply to the administration's proposal. First, to the extent the Treasury has concerns regarding the misuse

of the credit to disguise royalties, the reality is the "facts and circumstances" test coupled with the exiting limitations, is more than adequate protection. What's even more interesting is that what the current rules allow is for the tax system to address the reality that all energy companies face. This goes to the heart of the interplay between the two taxes regimes.

Most importantly, the proposal ignores the fundamental economic distinction between royalties and taxes. A royalty is the full payment that a company makes for a bundle of rights at the time it purchased them, whether in a bid or action, whatever it might be. The point that a royalty sets a price in the face of uncertainty for a bundle of rights to explore for oil. There is a practical economic limit to which any resource holder, whether it's private or government can actually impose.

And as a consequence, a "facts and circumstances" test like the existing rules is the ideal sort of approach to try to make sure that, on a

case-by-case basis, you can make that determination. Where, in fact, was the practical economic limit? Let the taxpayer provide the information relative to what the royalty was or make use of the Safe Harbor provisions and then move forward. The difference between the private resource holder and the government resource holder, of course, is that the government has a separate power that allows it to extract more in the way of income from the taxpayer in their jurisdiction. That's the taxing power.

In this instance, what you'll find is that oftentimes governments ironically, including the United States, will charge a far higher rate of taxation on the production of oil and gas than the normal income tax -- the generally applicable income tax rate. The net effect of that is to say that we've adapted a policy that would not only be damaging to the industry, but is oddly inconsistent with our own approach to energy taxation. I hate to say this, but it's rather stunning that the Treasury would adopt a set of rules and ignore the fact that the United

States applies exactly the regime that other countries do and then suggest that somehow there's something untoward about that foreign regime as it affects the taxpayers or the governments!

Finally, I want to wrap up with a few general comments about U.S. competitiveness. First it should be obvious that a competitive U.S. and oil and gas sector is absolutely critical to the U.S. economy. It represents an estimated $325 billion annually in terms of GDP, an estimated 9.2 million jobs directly or indirectly, which is roughly 5 percent of employment in the United States. Given the context of the economic recovery, one would question why you would impose higher taxes on this particular sector in light of the broader goals of economic recovery.

Certainly from the point of view of having been America's salesman at the Commerce Department at one point, I have to say that it misses the idea that David raised demonstrating the enormous platform that the industry provides in pulling goods and services through its supply chain from the United

States out to world markets. If the president hopes to double our exports inside of five years, one of the things you would hope he would do is try and support industries like the energy industry in terms of its competitiveness globally in order to provide the effect of pulling other goods and services through. That's absolutely essential, not only for the competitiveness of this industry, but also for the competitiveness of the ancillary industries that support it.

Lastly, in terms of energy security, the thing that strikes me dating back to when Lou and I first started to work together is the absolutely fundamental change in the shift of the industry overseas and how this Administration proposal would play out given that the national oil companies now dwarf U.S. producers. The question is why would you try and undermine this vital link to energy resources by imposing taxation that retroactively undermines the value of the investments that the companies have made. So in effect, what you're doing in my view is putting

the companies at some point on the auction block because you're sharply decreasing the value of the assets, their return. That looks very attractive to another oil company ultimately. Under those circumstances you have to question whether when you have a list of state-owned oil companies, at least two of which have interests that are diametrically opposed to the United States and avowedly in conflict with our companies, why you would set American companies up for acquisition by the state-owned majors.

So in sum, it appears that the Treasury has made a choice, while ignoring the global economy, that's going to have deleterious effects, not only economically, but in terms of our energy security.

Thank you.

MR. YERGIN: Thank you, Grant. I think two comments are in order. First, to reiterate that last point about the competitive field, one of the things that struck him was that the numbers of companies that now produce over a million barrels a day internationally is 16. So it's just a much more

competitive landscape.

The second thing is that Grant really made a very important distinction, which is kind of central to this whole debate; namely, the difference between a royalty and a tax. When Colonel Drake discovered oil in Titusville in 1859, a year and a half earlier than that he had agreed to pay a royalty, which is a rental fee. As I mentioned before to save you the trouble of looking in those pages of *The Prize*, this seemed to be a very settled matter. After World War II, Saudi Arabia, which had a royalty before World War II, decided to impose a tax as well? That tax went through a lengthy process of review in the U.S. Government by the IRS, by the Treasury Department, by the Joint Economic Committee and the Congress and by the National Security Council. All these different parts of the government said, yes, there really is a difference between a royalty and a tax. One is, as Grant said, a special benefit, a rental fee, and the other is one universally applied by a sovereign. I guess when I wrote those pages I didn't think that

years later it would be subject to contention with a kind of rewriting of history. This was the principle that was agreed to and now there's an effort, as Grant said, to rewrite not only tax practice but also the history of policymaking in the U.S. Government.

Let me turn now to Lou Pugliaresi to offer his comments.

MR. PUGLIARESI: Thanks. You know, a lot of the things I'm referring to you relate to research by my company which you can pull off our website.

First I want to commend CERA and David and Dan on addressing this issue because about a year ago we too became concerned about this issue. The problem is they taxes are boring. Few people want to hear about them. They're very complex but I am going to try to simplify the complex issues involved.

A year ago we did a briefing on the Hill on 199 relevant tax provisions affecting the oil and gas industry and the implication of rescinding the IDC. The interesting thing about domestic US policy is that there's a lot of net value. What it costs to develop

oil and gas is a lot less than what they sell for in the market. This difference has two components. There are inframarginal benefits and extra marginal benefits. The inframarginal benefits are all the jobs, economic activity, the spectacular engineering, the 4D seismic technology all which generate great value. The extra marginal benefits are also huge and flow to the U.S. Government. Consequently we have this very productive sector for which we have a strategy going forward that says, "Well, we don't want to do that anymore. We want to do less than it." If you read the Treasury Green Book, it says we are overinvesting in oil and gas.

But, from a point of view of an economist, you have all this wealth creating value out there and it's hard to make the case that we're overinvesting, particularly when you consider that the Federal government is actually the oil company's biggest partner. That was the big theme of all the work we did on the Macondo well. BP's biggest partner wasn't Anadarko; it was the Federal government. And how you

manage this asset going forward is very important.

We were at a panel discussion with a senior Interior official a few days ago, and I said, "You know, we estimate the net present value of the deepwater is 800 billion." And he looked at me and said, "Well, that's not that much money." I was just stunned. I was unable to respond. $800 billion net present value is a lot of money. That's why I think Treasury thinks it can get taxable revenue but they need to think not just as a receiver of the revenue, but as a financial partner.

We started a long-term study on Iraq earlier this year, and published a study in May called "Iraq's Ambition" for which we did a presentation at the New York Energy Forum. What was stunning about the whole Iraqi bidding process was that the Iraqis held a very open transparent auction. Yet despite this fact all the US service companies and, major oil companies said they could not make the economics of participating in the bid process work despite the fact that the Iraqis wanted American participation. This made us

ask the question why this was the case. While Dan described a lot of the reasons why they can't make it work. Clearly there are a lot off complexities. the answer is that if you are a major oil company and you're talking about a fairly well defined cost recovery system, then the net revenues to the Iraqi government is well over 90 percent making the margins wafer thin. If you're going to compete with ENI, Lukoil, StatOil, and CNPC, you have to make sure that you can take the rate of return to the board and survive while also being crystal clear about your expectations for your company's long term position. Some of the companies decided even with Iraqi encouragement that they couldn't make the numbers work.

There is also a cultural divide. I really can't explain this except to note that many of these critical tax issues such as the removal of the manufacturing deduction are not well understood. For example during the debate on removing the manufacturing deduction, many in congress only wanted

to remove the manufacturing deduction for the oil and gas industry. They had a concept that it was very valuable. Ho0wever in reality, the manufacturing deduction was put in place to put the U.S. manufacturing sector on a level playing field with other global manufacturers. Moreover, the refining sector in the United States is not that profitable. The joke is the golden age of refining only lasted two weeks.

This cultural divide leads many Congressional members to believe that "Oil companies must have a lot of money. Let’s just tax them at a different rate. Let’s treat them differently. After all the Treasury says we are overinvesting in oil and gas." There is not a full understanding that the industry itself generates a lot of revenue, a lot of net revenue, and that the government is a big beneficiary.

Finally, I think this is a really interesting study because if you look at our research you’ll see we think that the long run price of oil

may not be as high as many people think putting at risk a lot of these new technologies, plug-in electric vehicles, alternative fuels etc. There are a lot of reasons why we think this is the case and time does not allow me to address them. However if you have a tax system that is not robust under uncertainty, that doesn't put you on a competitive environment with the rest of the world. You are also , not able to address that uncertainty -- that oil prices may be lower in the future than the government and the tax authorities think potentially creating a lot of stranded assets and potentially threatening our energy security.

If you want to maintain this inframarginal benefit, all the engineering, all the skills, all the technologies in the oil and gas industry where the U.S. has a competitive advantage, you must have a competitive system that allows the American oil industries to compete on a worldwide basis. .

MR. YERGIN: Lou, two points strike me from your analysis. One is the importance of a tax regime

that is resilient to changes because, as we learn again and again, straight line projections don't actually end up going in a straight line. Just consider the fact that in 2006 it was absolutely universally accepted that we would never have a recession again because we knew how to manage things right and we were in "The Age of Great Moderation."

The other thing that strikes me in terms of the debate that we've heard is that one person's subsidy is another person's incentive. This is true across all sorts of different policies. However, when you see the list of subsidies that are provided to the fossil fuel industry--and it was in that context that *The Prize* was cited -- it turns out that the largest single "subsidy" is, in fact, the global recognition that there's a difference between an income tax and a royalty. What makes that a "subsidy"? Why is it described as a subsidy, rather than what it is, namely a royalty on which governments both impose royalties and income tax. Getting these definitions right is critically important to the discussion and getting a

properly functioning tax code framework

Let me turn it now to Kevin Book for a clear view of these issues.

MR. BOOK: Thanks, Dan. This is a great report. I read it with great interest because it treats a subject that is clearly esoteric, extremely important, and it does so in a way I think that is easy to understand. It is also an enjoyable read. Since the first two speakers covered several of my points I will try to address some other issues.

I want to frame this discussion in two points. The first is that the price of oil isn’t high enough and the second is that the price of oil is too high. The first point refers to something we refer to at Clear view as the "zone of no accountability," which is that if you go back two years , it was about this time that the 110th Congress let a 27-year moratorium on offshore drilling lapse. This occurred as the result of a recognition by Congressional democrats that the political accountability of blocking energy production here at home would be brought home to roost

in a world where “drill, baby, drill” was a frequent mantra. While frequently mocked, the slogan generated unease. The political chickens had come home to roost, and it was time to lift the moratorium.

A couple months before that, the nominal high price for WTI front month futures was $147.29, and at that point in time there weren’t many people talking about how we needed to increase taxes on oil companies to try to deter supply or to curb excessive production. So you can imagine it was a bit of a reality check when I sat on the Senate Finance Subcommittee Panel as an invited guest in September 2009 to hear the Treasury Department go through the Administration’s logic about how only a year later we were encouraging excessive production of oil and gas through a tax regime which is fairly well understood to be a defense of the American ideology that we like energy. Our lifestyle depends on abundant low cost energy and we want to secure not just current conventional supplies but also we want subsidies for the next generation of supplies, too. Whether or not

oil trade is a bridgehead to other kinds of trade, in this country everything relies on oil.

The Treasury Department's testimony wasn't just about these dual capacity taxpayer credits. It was also about Section 199, which was an artifact of a 2004 law which basically rescinded the extra territorial income tax law and replaced it with another regime supposedly keeping American industry on an even footing in recognition of changing global circumstances. This included IDC's, intangible drilling costs, expensing and also tax treatments, like IDC's that had been on the books for decades. It wasn't just a small change. It wasn't just a sort of wonky, esoteric little thing to talk about in a room full of tax specialists. This represented a sea change in the way that one of the largest industries, fully 10 percent of our GDP, had been making investment decisions for decades and in some cases more than a century. Of course, nobody really said anything in the outraged tones that were used to talk about price gouging the year before. This is the

"zone of no accountability."

Unfortunately, there are 6 million, 5 million, or 4 million, depending on who you believe, surplus barrels of capacity of oil in the world day today. As a result, you can take the entire Deepwater Gulf of Mexico offline and let it decline out from underneath you, which is what is being done today leading to a 160,000 barrels per day loss, an amount equal to about half of what IEA says non-OPEC growth will be this year and the price of oil can fall further..

In 2008, if somebody in Israel mentioned the word Iran, near a TV camera, the price of oil went up $5. If at any given time someone mentioned a pipeline that had potentially ruptured and supplies had been cut off to the Lower 48, gas lines formed at pumps.

And so you might ask where we are? Well, we're at a point right now where it's pretty clear that the U.S. Congress is probably about to undergo a political change and this is a very opportune time for this discussion because in all likelihood if you're

the party that's about to be changed, you try to leave your imprint on things as best you can. It happened in 2006 when Republicans were in the same spot. Under the tax reconciliation laws established by the 1974 Congressional Budget Act, changing dual capacity taxpayer status, changing IDC expensing for the integrated super majors, changing Section 199 deductions, only requires 51 Senate votes. This isn't a theoretical discussion. This could happen, and it could happen soon.

The second point though is that the price of oil is too high. So if it's not high enough to make politicians here care, it's too high to stop politicians overseas. This ha results from a phenomenon we refer to variously depending on the day or year as ROPEC or BROPEC or CROPEC. The point is that the sovereigns have the advantage. Yes, there is, in fact, as Lou said, a tremendous amount of economic value generated when you have a flowing barrel at 2- or $3 in existing facilities in the Middle East. You have new, fully funded barrels at

$15 and your sales price is $75. That economic value makes a lot of the sovereigns indifferent to the choices that they might have made at a lower price. They might have needed to invite in U.S. companies r to shore up their own production because when you only have $20 or $30 per barrel, you need every barrel you can get and the best technology is only available in the U.S. Well, it used to only be available here. When you've got $70 a barrel, the Middle Eastern and other producers can afford it themselves and buy it directly from services companies.

The competitive landscape has changed significantly. In this context, $70 a barrel, $75 a barrel, $80 a barrel, is more than enough for Petro bras to start wrapping its arms around the presalt, the ultra deepwater find of between 5- and 8 billion barrels of recoverable reserves with today's technologies --the next frontier of conventional oil which we're calling unconventional now because it's still hard to do.

Governments are taking a bigger chunk

chasing away our opportunity to secure it. So you might ask, well, so what? You'll buy it on the global market; it's no big deal. It's no big deal today. Will Brazil join OPEC? It doesn't seem very likely. Will Russia? They didn't get along when they were talking two years ago. Ultimately, however, if we control the flow of investment as a matter of policy, not only do we reap some of the benefits associated with that investment; we also can do something about the pace of investment. If $70 is too high right now to stop the international companies and it's too low to stop the U.S. Congress from changing the competitive landscape, we're looking at a world where we might be sort of stuck in the middle with a considerably tighter supply future -- maybe not 3 years out, maybe not 4 years out -- but in the 5- to 10-year future which is far too soon for electric cars and far too soon for natural gas vehicles. In other words, we're at one of those moments in between the "zone of no accountability" and a ROPEC, CROPEC, BROPEC future where this decision is really going to

matter.