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MEMO TO THE PRESIDENT:  
BUILD A SECURE ENERGY FUTURE

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## P R O C E E D I N G S

MR. DIONNE: I want to welcome everyone here today. The turnout is a sign both of respect that all these folks who are talking with us today have from a lot of people around town and also the immense interest in this particular topic.

My name is E.J. Dionne, I'm a Senior Fellow here at Brookings, I write a newspaper column. My main qualification for being the moderator of this panel is, I am probably the least qualified person in this room on the subject of energy and climate change, and therefore, I have lots of questions to ask. And also, I look forward to your highly knowledgeable questions.

Our plan is that I'm going to go right into questions with our panelists. I have several questions I've asked them in advance about the things they most want to talk about here. And I'm also going to move to the audience very, very quickly.

It goes without saying, but I should probably say it anyway; in thinking about the incoming Obama Administration, every single the new – the President-elect has given every single that we have gotten from his staff is that energy and conservation and climate change will be one of the three or four central issues of his presidency, one of the three or four

areas where he most wants to innovate. Someone made the case that for the President-elect personally, energy is the most important issue. I won't make that claim today, but it's very clear that this is central to him. So we couldn't be discussing a more important topic here today.

And we have a great group to do it, and they will be discussing a report that they have put together, a series of very thoughtful proposals. Most of my skeptical questions will be, how in the world do you do all of this in the midst of an economic downturn of this sort, and they will explain how, in fact, what they propose will help us out of the downturn. I'm doing their spin in advance on their behalf.

Suzanne Maloney is a Senior Fellow at the Saban Center for Middle East Policy here at Brookings. Her research focuses on energy, economic reform, and economic policy toward the Middle – U.S. policy toward the Middle East. So she only deals with easy issues. She was a member of the State Department's Policy Planning Staff, covering Iran, Iraq, the Gulf States, and broader Middle East issues, again, only dealing with the easy stuff. Prior to joining the government, she was a Middle East advisor at Exxon Mobile, where she worked on regional business development. She has a whole series of other qualifications including membership of Council on Foreign Relations Task Force on U.S. policy toward Iran, chaired by Dr. Brzezinski and Robert Gates, and is the author

of a forthcoming book on Iran for the U.S. Institute of Peace. She holds a PhD from the Fletcher School of Law and diplomacy at Tufts University. In fact, I think she has in common with the late Daniel Patrick Moynihan, I think that's where he got his PhD.

Bill Antholis gave me just a brief bio here. He knows everything about everything. He's Managing Director of the Brookings Institution. He has worked on foreign policy and economic policy at the National Security Council and the State Department. He was Director of Studies at the German Martial Fund of the United States. He hides the fact, but he is also really shrewd about politics, and I love chatting with him about all these things.

Charles Ebinger specializes in international and domestic energy markets, oil, gas, coal, and nuclear, and the geopolitics of energy and nuclear non-proliferation, with a particular focus on the Middle East, South Asia, and Africa. He has served, I like this, as an Energy Policy Advisor to over 50 governments. And my first question is, which governments didn't you work for? And so this is a fantastic panel.

And let me just start with a question for Bill. Could you talk about the short term conflicts between energy security and climate change? We like to think we can solve all these problems easily at once, but as you have noted, there are conflicts; for example, off shoring drilling

and coal to gas technology could help lessen our dependence on foreign sources, but they could also add to global warming. Could you talk about those trade-offs?

MR. ANTHOLIS: Sure; first of all, thank you, E.J., so much for hosting and thanks to everybody for coming. This is a terrific series for Brookings and we are really I think lucky to have a moment where both presidential candidates made energy among their top, if not for both, their top priority, so I do think we're going to see forward action on the issue. That said, both candidates were committed to both energy security and to climate change, and I think privately all would agree that while there's mostly confluence between the two, there are some potential conflicts. I think energy security for many people in the United States is defined, particularly in the short term, by increased supply of oil, and that was particularly the case four months ago when prices of energy were quite high. And so the effort to provide more security was providing more supply. And you could see in things like offshore oil drilling or taking coal and turning it into petroleum, which has – both of which potentially have real negative contributions to the climate change problem.

Some of the more hidden conflicts are in your international diplomacy. If part of the big picture of climate change is trying to bring countries like India and China into a global set of agreements, but you are

the President of the United States and you have a relatively short list of asks and priorities in bilateral meetings or the broad bilateral relationship, a real question comes to what comes first, climate change or Pakistan's nuclear - you know, with respect to India - relations with Pakistan on nuclear issues, or Iran's drive to get nuclear weapons, or with respect to China, dealing with North Korea and its nuclear issues. So there's an element of energy security that's tied up in nuclear diplomacy that could undercut your efforts on climate change. That even drills back to domestic policy. If you are pushing hard for adding more nuclear at home and that leads to broader licensing, not just in the United States, but a renaissance of civilian nuclear overseas, making sure that you're not contributing to proliferation issues and the like. So there really is potential conflict and the incoming administration has to really watch and manage those in both directions.

MR. DIONNE: It wouldn't be fair of me to ask how you would resolve this fundamental conflict, would it?

MR. ANTHOLIS: Yeah, I think it would be fair, because I think anybody that spouts off on this should have to answer the question. I mean I think the key thing for a president is to keep your focus on the middle to long term and not to focus too much on the short term, because most of the conflicts come up in the short term.

If you have a long range perspective and you are thinking about, from the climate change perspective, you know, 2050 as a target date, a lot of the things that you're doing on climate change are supportive of these kinds of energy security challenges, the national security challenges. You are setting a price signal that is both to domestic industries, but also to your partners internationally, and it gives everybody time to adjust and set expectations in the right way. So my advice would be, focus on the middle to long term. There's actually very little that you can do for short term energy security either in terms of supply, but also in terms of, you know, the Irans and the North Koreas. There are clearly negotiations going on and you need to push and keep those moving along, but with respect to climate change, keep your focus on the long term.

MR. DIONNE: And by the way, Bill reminded me that this is the first of a lot of sessions we're going to have at Brookings. I think there are many substantive problems with the long interregnum between election and inauguration, but they're very good for places like us because it gives us a time to put a lot of ideas on the table in an important period, so please stay tuned.

Bill is a perfect transition to the question I wanted to start with with Suzanne, because we've noticed that not only is it hard to predict

the short term, but where oil prices are concerned, it's almost impossible; not only is it hard to predict long term, but where oil prices are concerned, it's hard to predict the short term. Could you talk about first the implications of recent oil trends boom and bust for U.S. interest in the Middle East, particularly regional security, and also, this is the long term question, what are the most urgent threats to energy supplies, and what can a new administration do about them?

MS. MALONEY: Sure; and I will inevitably focus my remarks and my answer here on kind of the Middle East dimension of that question, but one could broaden it to really deal with any region of the world. It has been just a phenomenal rollercoaster ride when it comes to oil prices, and that has been felt most particularly in the Gulf and in the broader Middle East.

This is not the first time that the region has gone through this kind of an experience, but it is certainly I think magnified over a short period of time with a phenomenal amount of revenues coming into the Gulf that have spread around the region in a way that I think makes an argument for some perspective that this, in fact, could be an oil boom that is good for the region as opposed to all of the previous periods of price escalation and massive revenue escalation in the region that have, in fact, contributed to a lot of the distortions, both political and economic. What



we've seen over the past five to seven years has been real economic reform in a number of states, particularly in the Gulf, but also Egypt and North Africa. We've seen intraregional investment triple, which is very important to extending the boom beyond just the major oil producers and ensuring that the sort of employment and investment effects are being spread across the region in a meaningful and sustainable way.

And we've seen savings increased and debt reduced.

These are all really important trends. At the same time, this is a part of the world where two-thirds of the population is under the age of 25, where there are massive investments needed, and infrastructure, whether it's power, water, educational infrastructure, and job creation, 80 million new jobs that need to be created by 2020 to satisfy just the young population that's coming onto the job market today.

So we obviously see some real tensions between the amount of money that's coming in, the capacity of the region to invest it in a way that's going to create real growth, and some of the past experience with doing just that.

I think the track record has been positive to date, we've seen some good trends, but obviously there are some real risks at hand. In terms of what the longer term trends are for energy security, you know, again, back to the Middle East, you look at just how important this part of

the world is to our traditional understanding of energy security, which is, you know, very much a geopolitical one, and that really comes back to the fact that two-thirds of the world's proven oil reserves are found in the Middle East, a third of the world's gas is to be found in the Gulf, and somewhere around 40 percent of globally traded oil passes through this tiny Strait of Hormuz which obviously is bordered by Iran and subject to a lot of the tensions that we've seen play out in the Gulf over the past 20 to 30 years.

This has been a region that has experienced a great deal of conflict, both intraregional conflict, conflict that is drawn in the United States, considerable political instability. Al Qaeda has, over the past ten years, attempted to target oil infrastructure facilities in Saudi Arabia and elsewhere in the Gulf. These are all real risks that we're going to have to focus on and that are going to have to be a priority for a new administration coming in looking at the broader energy picture.

How do we ensure that there is a stable supply of oil coming out of the Gulf, that we're dealing with some of the infrastructure threats? I think inevitably, we're going to have to be expanding upon the dialogue that the Bush Administration created with the Gulf states, trying to create really a region wide platform for dialogue that would encompass not just the Southern Gulf states, but also Iran and Iraq, looking at the risks to the

Straight of Hormuz, looking at protocols that could be developed for incidents at sea, really at the building blocks for kind of intraregional cooperation for ensuring that this part of the world can experience a more peaceful and prosperous future.

MR. DIONNE: Thank you. I'm glad President-elect Obama isn't here, he might change his mind about the job he is about to come into. Happily, this report is not called drill baby drill. But I do want to ask Charles about off shore drilling. Senator Obama initially opposed off shore oil drilling, kind of changed his view later in the campaign. Was he right in the first place, that drilling is no solution to our energy crisis? What role would increase drilling off shore play in some – in energy independence solution?

MR. EBINGER: Thank you, E.J. Well, he was both right and wrong. He was right in the sense that, clearly, when this policy was articulated, we were looking at \$147 a barrel oil at its height; and clearly, if we found a giant oil field off shore even today, it would be seven to ten years before you'd see large production coming in. So he was absolutely right that it wasn't a near term solution to what people were concerned about at the gasoline pump. But he was wrong on the long haul, I would argue, because with the exception of 2007, for the last number of years, U.S. domestic production has been in decline.

Now, some environmentalists would say that shows you the oil isn't out there, so that shouldn't be part of our energy policy. I would disagree, because it's going to take us, even if Senator Obama is able to build his new green energy grid and all the things he's talked about, we're talking about 25 to 30 years at a minimum before we are fundamentally going to move out economy away from petroleum.

With our domestic production falling, that means in the interim, even while we're developing newer alternatives, we're going to see our oil imports rise, we will become more dependent on oil from politically volatile regions, such as Suzanne was discussing, and so I think prudent drilling, we can argue about whether it should be in Anwar or off shore Florida, but prudent drilling, an exploration and seismic activity, is certainly something I believe we should continue to do. Just keep in mind that the most optimistic assessments on your so called hybrid vehicles talk about maybe having a million vehicles in eight to ten years, that would be a tremendous achievement, and we should push that every way we can.

But the reality is, we have 240 million vehicles on the road today, and that is not going to remain probably a static number. So one million out of 240 and possibly growing, although it may shrink with an aging population, I think if you put it in that context, I do not believe we will not be using petroleum for a major source of our automotive fleet, and I

mean at least 40 to 50 percent, although it's 70 today, ten to 20 years from now.

MR. DIONNE: By the way, the drilling issue is one of those face' pieces of politics where, while advocates of off shore drilling voted for McCain, they voted for him narrowly, but the minority that opposed it voted overwhelmingly for Obama, so that ironically, a position in which he sort of leaned toward the minority may actually have helped him because of the strong views held by that minority. Can I just – just another very practical thing, this report, lots of people have been talking about a new and green energy grid; can you talk about the troubles that – the difficulties that that presents and why it should happen anyway, which is I think your position?

MR. EBINGER: We definitely need a smart, new national transmission grid, particularly to allow us to use the tremendous resources, wind in the Great Plains, and solar in the Southwest and elsewhere, because right now, someone like Ted Turner who has a million acres of personal land in New Mexico wants to develop it into large wind generation and solar voltake facilities to move that power into Phoenix and Southern California; the reality is, it can't be done, and the reality is, we do not even have a national energy grid, we have essentially three different

grids, Texas, the east, and the west, which are very poorly connected in a number of places.

It sounds great. I mean who can be opposed to creating a national electricity grid using solar, wind, geothermal and other wonderful things, and reducing our dependency on dirty coal, and in the case of some of Mr. Obama's supporters, awful nuclear power, which I happen to be a supporter of. But, that said, the reality is, just to give you an idea of what we're talking about, we're talking about an existing grid of nearly 200,000 miles, we're talking about an existing grid with 500 different owners, and probably nearly as many regulatory authorities between the state and the federal government and local municipalities, we're talking about a nimbi syndrome, which is perfectly good reasons, if you happen to live in the path of one of these planned electricity transmission quarters like Northern Virginia, we don't particularly want big towers going across our most preteen Civil War battlefields.

SPEAKER: After this election, we can be sure it won't go through Northern Virginia, wherever else it goes.

MR. EBINGER: But the reality is, where we're sitting today, or particularly in Maryland, we are facing a state wide energy – electricity crisis by 2011/2012, that if we don't find some way to deal with, we're going to have a very serious negative economic situation, and we're not

alone, the whole mid-Atlantic is in this position. So at some point you have to decide who is going to have the authority to build this grid. Some people would like to give it to the Federal Electricity Regulatory Commission, others disagree with that because, in reality, some states that are moving in their own way with renewable portfolio standards for renewables are fearful that if we build the grid before we have a climate change policy in effect, that the near term effect will be to have more coal used, because coal will remain, absence a carbon cap and trade system, coal will remain the cheapest source, so a lot of people think you actually, by building a national grid, if you can't get a cap and trade program through the Congress, you'll actually enhance the CO2 problem.

But there is no question that we have a lot of electricity capacity built today, that -- those are the inadequacies of the transmission system, lies idle a large part of the time. We could definitely lower electricity prices on average everywhere in the country with such a grid but it is going to be a political battle of monumental proportions and maybe even eclipsing the debate over cap and trade.

MR. DIONNE: I know how he'll answer this, but I found the answer interesting. So I want to ask Bill the question, which is when will be know that President-elect Obama is serious about climate change in particular and not just about energy independence?

MR. ANTHOLIS: I think we should know by the middle of this calendar year or toward the end of the summer, early fall and the reason for that is the next upcoming international negotiation on climate change. I've almost lost count of the number of years since Kyoto, but I think we're coming up on 12 in 2009.

This meeting in Copenhagen is a big deal and the United States is going to be particularly empowered if it comes to the table having passed some sort of domestic legislation, specifically to address climate change. The administration will undoubtedly do a number of things coming right out of the box.

Particularly with a stimulus or recovery package early in the year that will have green elements to it, investments and research and development for alternative fuels and infrastructure and possibly the grid. But clearly some climate change legislation is going to be needed domestically to empower the administration in its international negotiations. And what the contours of that looks like will be really meaningful.

You know, I think back to Kyoto where the American government really only started paying attention to Kyoto, there had been working group level meetings for well over a year or two years beforehand, but the President of the United States didn't really focus on it until the G-7 Summit that summer when after he went into the summit, it



was in Denver.

He went in empowered with a very strong economy and he reminded European countries that our economy was doing great and only if they did what we did internally to get there they would be doing as well. And they responded, but you are doing nothing on climate change and they were the skunk at his garden party in Denver and in the next six months six months suddenly the entire government tried to get up to speed in time for Kyoto.

This government is certainly not going to do it in that way, they are going to start early I think. It's going to be energy security and climate change, but the question is can they move something legislatively in the summer or by early fall so they go into those negotiations empowered or at least demonstrating that they are making some progress in that regard.

MR. DIONNE: I want to ask Suzanne a particular question and then I want to move to a large, perhaps skeptical general question to all of you.

But Suzanne the volatility of prices in the course of this year is just really extraordinary. I mean each of us feels it, we remember just a couple of months ago paying about double for a tank of gas. What impact

does that have, does this volatility have on our security and how does it affect our allies?

It certainly can't help President Ahmadinejad in his reelection campaign, that's one thing I think is true. But could you address that?

MS. MALONEY: Right. It's been a subject of a lot of discussion I think particularly with respect to countries like Iran as well as Venezuela, Russia and others that we may have trouble with in dealing with in terms of primary U.S. security interests.

With respect to Iran I think we have to be careful not to overstate the impact of the drop in oil prices. It's fairly significant. It could well cut oil revenues which are the overwhelming proportion of Iran's foreign exchange by more than half by the end of this financial year, which for the Iranian's ends in March. And that has a fairly dramatic impact on Ahmadinejad's ability to spread the wealth and by doing so make a case for his potential reelection in June 2009 when Iranians will go to the ballot box again.

At the same time it actually paradoxically somewhat helps Ahmadinejad at home where he's been trying to sell some fairly painful economic reform programs. It has been the somewhat ironic product of a repressive conservative turn toward the Iranian government that has in

fact launched considerable economic reforms focusing on gasoline subsidies about a year ago and more recently looking at trying to reform the broader subsidy program which is one of the areas that has contributed to the degeneration of the Iranian economy over the past 25 years.

So ironically it could make a case for urgency around some of the legislative programs that Ahmadinejad is trying to get across while at the same time costing him potential public support by depriving him of some of the revenues that he was using to generate that support.

I'd also note of course that Ahmadinejad managed to make a big mess of the Iranian economy precisely while the revenues were so large. So it's uncertain as to whether or not he can manage this kind of a transition. I think there's a lot of optimism around what the decline in oil prices means for our leverage across the Middle East and some of it is going to be quite good in the case of Iran.

In other countries, other places we have to be careful not to celebrate too preemptively. Many of our major allies in fact while having budgeted and planned somewhat cautiously at the start of the major oil boom earlier in this decade have since adjusted their plans. Saudi Arabia and others have massive economic programs, investment programs underway that are essential for supporting the demographic boom that

they've experienced over the past 20 years.

And we do not want to see another scenario by which GDP per capita falls by somewhere in the realm of 20 percent, which is what happened after the oil price crash in the mid-80s. That's not necessarily good for our security interests in the Middle East.

It's why one of the things that the President needs to do as he looks at the broader issues of climate change and energy security is really engage in a serious dialogue, a multilateral dialogue. Not simply, I think, within the Middle East but a broader consumer-producer dialogue looking at how one can manage these long-term price trends, how one can manage both access to and supply of petroleum products over the next 25 years as we look to make this transition.

I think as president Bush began to talk about energy security in terms of oil addiction, that unnerved a lot of our allies in the Middle East. Unnerved a lot of the traditional Gulf oil producers. At this stage of the game most of those countries have adjusted to a new reality in which climate change, energy security, these are all intertwined issues and the question of how to deal with oil consumption and oil demand is going to be a major question for any Western government irrespective of where the price goes.

But we need to be having a conversation that is not exclusive of the oil producers, whether we're talking about countries or companies. And I think that is going to be one of the real challenges for the Obama Administration given some of the campaign rhetoric that was used.

MR. EBINGER: can I just pick up on, I would thoroughly endorse Suzanne's remarks on the need for a producer-consumer dialogue, because most people haven't focused on the fact we hear about India's and China's contribution to climate change. But if you actually take all of the Gulf countries *in toto*, they consume nearly as much oil domestically as does China currently.

Now China's, because they're on a very fast-growth track and we can't think that we can bring those countries to Copenhagen and Copenhagen's aftermath if we simply say our policy is to destroy the world oil market for our own security, so I think she's right onto something.

I also want to point out that just this morning Goldman Sachs, it's hard to believe, but Goldman Sachs actually came out with a report saying there was now a risk premium for the, should be a risk premium for the long-term price of oil because prices were coming so down that the domestic drilling industry was endangered of a real downturn. And that actually from talking during the campaign about windfall profit

taxes and so forth, that we're actually now in a situation where we may be moving towards a situation such as in 1986 where with higher prices today being required, we be seeing Houston knocking on the door for relief if we see prices go down to 50, 45 which I personally believe they will.

MR. DIONNE: You know, I've been thinking of a lighter side of economic downturns, oil prices come down. We'll probably going to pump less carbon in the atmosphere because we won't be doing as much. Even the illegal immigration problem, a lot of undocumented immigrants are going home because the jobs aren't here.

But our ideal solution to all of these problems is not an economic collapse and in fact, it strikes me that when you look forward just a few months ago when prices were so high there was an enormous momentum behind all sorts of efforts to move to new technologies. And now suddenly with these much lower prices our habit is to say, well we don't need to do that yet.

And for a new President in the middle of a downturn the thinking long-term is even harder because the pressure on him and the new Congress is to get the economy moving again.

So I want to ask a two part question about alternatives to oil, to reduce our dependence on foreign oil, but also on cap and trade and

solutions for global warming because on the one side it does seem that pressure will diminish, political pressure will diminish and on the other side given the priority of getting the economy moving quickly, the argument now I think will move from well we don't believe that there are human, you know, that human actions are behind global warming. I think that view is now in a very small minority. But people say okay, you guys were right but we surely can't do it now in the middle of this downturn. This can't possibly be our priority now.

Could you all address this and I think this is a real problem for people who want to innovate in these areas. And some of the, you know, investment in green technologies that will all be pretty easy because it can be cast as job creating and all of the rest. But that's the easy stuff, even if it's expensive stuff.

But I'd just like you to take these two sort of the reversal of the political pressures and talk about them.

Maybe Bill my shrewd politician here. I always mean that as a compliment, no one else takes it as a compliment.

MR. ANTHOLIS: Well, it is a, if not the critical question over the next six to eight months. Will the urgency come out of addressing this issue with the falling gasoline prices?

And there's a bit of irony in this because while gasoline and automobiles certainly contribute to climate change, they're not a majority of the contribution in the United States. The biggest part is from coal. And what has always been talked about with respect to climate change is thinking relatively long-term about these things.

We need to essentially get a growth trajectory in emissions to start sloping downward. And the way you do that is set a long-term price signal. It doesn't need to be an immediate startling one, but it does need to be out there and indicate where major investments need to go over a 20, 20 year time horizon. If you just think about how long a coal-fired power plant stays in existence.

There are a lot of them that were built 20 or 30 years ago that still have life in them and nobody's talking about shutting those down tomorrow. But you have to set that price signal out there and entire market is almost completely separate from the widely fluctuating gas and oil market. Coal prices are relatively by comparison are incredibly stable and the key is to start ramping those prices, the carbon element of those prices up so that either technology can come in that is carbon free or technology that can come in and take that carbon and do something with it.

On the oil and gas side, there is need for action and that's



really where the political energy that has come out of the equation needs to be addressed. I think the answer there does have to be and it's a real question of how successful it can be. We can't depend on low oil prices for the indefinite future.

The way that we got into this mess is we weren't prepared, we spent 20 years doing nothing, we're going to do it different this time. I think they have to bank on, but also do research quite frankly on how resonant the memory of three months ago still is in the mind of the voter. Do people fear the \$4 gallon? Do they fear that we're going to go back to it again once economic growth picks up?

And that's a political unknown that they better be doing research on.

MR. DIONNE: Thank you. Suzanne.

MS. MALONEY: I would just say one of the dangers, one of the elements that we have to watch out for in how the new administration rules out any real major effort to focus on climate change and energy innovation altogether is to avoid trying to center this on a national security argument.

I think there's obviously a case to be made that there are national security reasons to address our reliance on oil and gas. And

that's an important dimension of any case that is going to be made when one goes to the Hill or when one asks the American people to make sacrifices on behalf of this kind of investment.

On the other hand the new administration needs to be managing potential expectations and I think some of the dangerous loose rhetoric out there about if we do X we will be able to eliminate our dependence on foreign oil. If we do Y we will no longer need to worry about the Middle East as a major component of our security. That's purely illusory. Every bit if not more illusory than the "drill baby, drill" talk and so I think it's important for the new administration to kind of set the tenor to focus on the time kind of economic argument to address the dimensions which this is a national security problem.

But also remember that we will and continue to remind Americans that our entanglement with the Middle East, our economic and political and strategic relationship with the Middle East will have a very central energy component for at least the next 25 years and probably well beyond that.

MR. EBINGER: I would think the administration if they want to be believable in Copenhagen has to make a priority of their climate change policy leading an international effort to not only prove that carbon capture and storage is technically possible, but most importantly that it's

commercially possible.

And I think if they would convene a group and launch a major effort with the scientists from the major coal producing countries and make this a cornerstone of their policy it would send a clear message, because everyone in this room knows apart from what the United States does on coal if there is not a solution to burning coal cleanly in terms of CO2 you will not get China. You will not get India, Indonesia, Pakistan, the list goes on.

You will not get them to take the tough decisions on dealing with climate change and as a result whatever we do after spending hundreds of billions of dollars will make no difference; literally no difference in terms of saving the planet.

So that's one component that I would urge them and I think Senator Obama said that in his, the night he was elected. When he said the four priorities were solving two wars, saving the planet, and the fiscal crisis. That to me sent a clear agenda that climate change is not going to go away because of tough economic times.

The other thing I think they have to do, it's time to get tough with Detroit. It's not time to see the United Mine Workers and all of the old committee chairmen of the Democratic Party cave into them one more

time without demanding, unequivocally that they be retooled and helped but to produce the finest, most fuel efficient cars in the world. Not this big new line, it may be the best truck in the world that Detroit and GM are churning out, but make fuel efficient vehicles and any executive once we bail them out that isn't willing to get on board fire him.

This is the most important thing because when we come back to energy security, our oil problem is a transportation fuel problem and only a transportation fuel problem. We don't burn any major amounts of oil anywhere else.

So the answer is we've got to address the transportation with hybrid vehicles, CNG where appropriate, and other alternatives. But we've got to lay down the law and not do one more bailout of the automotive industry so that 20 years from now we have the same old mindset.

MR. DIONNE: Suzanne.

MS. MALONEY: I just wanted to add one point which is that we need to be careful about drawing any conclusions from what the price per barrel or the price at the tank is today. I know Charlie and I would probably disagree on this to some extent but I think there are vast, it's a vast uncertainty where the price of oil is going to go and I think the

memory of \$4 a gallon oil is still fairly fresh, at least in my mind as a potential minivan customer these days.

MR. DIONNE: I've got one to sale you by the way.

MS. MALONEY: In reality most of the demand increases are coming out of Asia and so long as we don't see a sort of collapse of India, of China, of the growth rates that at least all of the major international financial institutions are predicting will hold, albeit it's slightly curtailed rates of increase than what might have been predicted a year ago.

So as long as we see the Chinese and the Indian economies growing at sort of epic rates, we're going to continue to see this real upward pressure on the price of oil and we could very well be back in a position of having to worry about this sort of economic pain of consumers which would paradoxically help us with the political agenda.

MR. ANTHOLIS: I think there is a sort of, something that connects both Suzanne and Charlie in this in a complimentary good cop message, there's Charlie's bad cop message which is to the auto industries but to a number of other industries that actually are already on this bandwagon or leading the bandwagon, which is this is potentially a major export industry if American industry invests in the right way to India and China.

So if you make the fuel efficient vehicle, you're not doing it just because the government tells you, you have to do it. There is a huge market out there. The reason that the price of oil will possibly or probably come back is because of that driving demand in India and China, literally and figuratively the driving demand.

And China and India don't necessarily want all of that driving to be based on our Ford F-150 truck. You know, they probably want and they have in Japan and we can't get it here in the United States, hybrid minivans. That's what they're going to want to be driving over there and we're going to want to be driving them here and the American automakers should be able to do that for us.

MR. EBINGER: If I could just make one – I'm not sure if Suzanne and I are that far apart. I may believe the price of oil is coming down further in the near term, but long-term I just want to remind everyone that the farther the price of oil comes down the faster it'll go back up, because once the world economy resumes, if we're looking at my forecast and, say in the upper 40s, at the upper 40s it will be one of the engines that resumes economic growth and very quickly will have the same constraints on supply and demand that led to \$147 oil. I am a bear in the near term; I am a raging bull in the long term for oil prices.

By the way, I learn a lot of stuff hanging around here at Brookings. I never knew until Suzanne spoke that \$4 gas was actually a zero population growth conspiracy to get fewer children.

But, see, I want to turn to the audience. We've got some mikes going around. Let me ask my friend Mr. Mitchell up front here, who always asks good questions.

He does.

MR. MITCHELL: This'll be the time he doesn't.

MR. DIONNE: Oh, and if everybody could identify themselves just so --

MR. MITCHELL: Right. Gary Mitchell from *The Mitchell Report*. We ask -- I suppose the focus would be -- would be with Bill but any -- Bill Antholis, but anybody else. We've spoken today -- you've spoken mostly around strategy and policy, and I'm interested to know your thinking about the politics and the structural components of this. I know you speak to it in your memo, but let me try to phrase it this way, and then you can answer it however.

MR. ANTHOLIS: Sure.

MR. MITCHELL: Efforts like this are going to take real bipartisan support in the Congress. We think about how in the brief shining moment of bipartisanship in the first Bush term education, legislation, Senator Kennedy and Congressman George Miller played a key roll in that. We can go back to the role that Bradley played during the Reagan administration and back to Ev Dirksen and civil rights. So, my question is this: (a) Who do you see as the likely congressional champions and leaders on this cluster of issues, particularly on the Republican side but also Democrats, but I'm interested in that piece; and, second, as sort of a subchapter of that, is it axiomatic that if this is going to move with some speed that John Dingell goes into retirement, and what's the likelihood of that? So, if you could speak to some of those sort of political and structural components, I'd appreciate it.

MR. ANTHOLIS: If I can talk quickly about broad trends and then come back to the specific. Two years ago when the Democrats took over the House, I did a little internal study here at Brookings and shared it with colleagues internally about what a striking moment this was where you had two intersecting lines, the support for free trade coming down and the support for clean energy going up. And there were, for the first time in the 15 or so professional years that I had been paying attention to these two issues as parallel universes, it was striking to me that there was more



support probably in theory for moving ahead on climate change than -- for a global climate change agreement than for a global trade agreement, and that is only accentuated in this most recent congressional set of elections both with adding to a Democratic majority two of the new senators that are coming in on the Democratic side -- three -- Mark Warner in North Carolina and in Oregon -- are certainly more clean energy than the people they're replacing. Mark Warner replacing John Warner ever so slightly more because John Warner was a real progressive, but both Dole and -- Gordon Smith is quite good but he's giving way to somebody that has even more progressive views, and the decline for free trade, and that's really quite a striking structural change in American politics whether it had been broad bipartisan support for trade and now there is increasingly bipartisan support for clean energy. How far that goes is a big question. Nobody knows, particularly in the Senate, how -- you know, there was a relatively tough fight last summer over cap-and-trade where it was clear that they were about ten votes shy of really passing something significant. How much progress have we made in that regard? It's unclear, and it also really depends on what the final structure of the deal.

The House side is -- those numbers are bolstered as well, and the committee chairmanship as you were suggesting really does come into play. I don't want to speculate on Congressman's Dingell's

future. What I think is quite clear, partly because Congressman Boucher yesterday -- he's from coal country in Virginia -- quite clearly said it's not a question of whether cap-and-trade; it's what kind of cap-and-trade is coming and what does the structure of this look like? How does the legislation reach out to the auto industry, to the coal industry, and others to make it more amenable to them? And that's where the gain is right now, and the committee chairmen play into that. But the broad structure of the Congress I think is generally moving in the direction of doing something.

MR. MITCHELL: And Republican analyze on this?

MR. ANTHOLIS: Oh, Republican analyze. Certainly in the Senate, Dick Luger is going to be the leading voice, but John McCain could play a very big role on this. I know that he and Senator Obama or President-elect Obama had a conversation about being involved, and, you know, people are speculating that, you know, he'd be a terrific energy czar and this was clearly his priority issue. Now whether that includes drill baby drill as part of the deal is the real question.

MR. DIONNE: I was just thinking the logic analysis is that this Congress will vote for taxes on cars that aren't green enough but only if they're made abroad, and then you would bring this coalition together.

This gentleman over here.

MR. MEYER: Hi, Alden Meyer from Union of Concerned Scientists. We've got sort of three moving pieces as I see it: the energy investment piece -- the 150 billion that President-elect Obama's talked about over ten years, some of it as a stimulus deficit financing some of it perhaps longer term; energy policy -- things like standards, renewable electricity, smart grid, vehicle economy, low carbon fuel, etc.; and then the big kahuna, which is the cap-and-trade bill -- and they're sort of escalating degrees of difficulty. If you look at the investment package, it's kind of like eating your dessert, especially if you can finance it with deficits. The policy stuff is harder, as we've seen in past years, given the regional -- not only the partisan but the regional differences and the cap-and-trade is the hardest. I'm just wondering how you see the relation of these both politically and in terms of the Copenhagen package and what has to get done by then to send the signal to the world that this President and this Congress are truly different than the situation we all faced in Kyoto when the Congress clearly wasn't backing the Clinton-Gore administration on the climate issue.

MR. DIONNE: It's a great analysis. Who wants to take that up? Charlie, do you want to take a step?

MR. EBINGER: I'll take a step.

I think the first thing you do is -- well, the key ingredient is the development of the transmission grid, because without that a lot of the other things he's talked about and that you outlined very well just aren't going to happen, and you can argue -- we're talking big numbers. I think (inaudible) Chairman Kelleher said the other day -- we talked somewhere - - I think it was 220 billion estimate he threw out. Now, there have been proposals that would never be popular but of putting some kind of surcharge on everybody's electricity bill for a number of years. But I think if we don't go saying that we're really going on that green path, particularly since it was such a cornerstone of the Obama platform, he won't be believable in Copenhagen. I would put that first and cap-and-trade down the road.

MR. DIONNE: Let's see, that lady right here. Thank you. It's good to see you.

SPEAKER: Dr. Ramlut spoke about a committee of high-ranking scientists to discuss carbon emissions. The public seems to perceive nuclear waste as the most important problem impeding the growth of nuclear power. Is that a significant enough question, in your view, to be discussed?

MR. DIONNE: And is Obama now committed not to putting it in Nevada given the election results?

MR. ANTHOLIS: I think he's committed not to putting it in Nevada. And I would like to Harry Reed if he said he was going to. But that said, I think -- at least the consensus I hear from people in the industry is that we can continue to store on site for at least the next 20 to 30 years, even with a fairly vigorous revitalization of the industry, which I think is unlikely to occur -- largely because of the cost of new reactors. Now, long term, we certainly have to address this issue. The problem that I think hasn't gotten enough attention -- the people that want commercial reprocessing of nuclear waste arguing -- and correctly -- that it helps remove some of the most dangerous isotopes and so makes the long-term storage a simpler issue at one level. On the other hand, the reality is that commercial reprocessing increases the absolute volume of intermediate low-level waste. So, you have a different kind of problem but you have maybe a bigger problem in terms of the size of the repository. And it's gotten lost somewhere in the debate during the campaign that if you weren't in favor of Yucca Mountain you were against nuclear power and so there is no -- there should be no link between commercial reprocessing and whether we can have a nuclear resurgence, but there seems to be in the public's mind.

MR. DIONNE: It does strike me that the cost is really -- even if you could solve all the other problems, the cost is extraordinary and for the short term it's going to be very hard to find the investment.

MR. ANTHOLIS: Well, I guess what I found most compelling on this, E.J., was -- that was my assumption as well. But I saw a presentation by one of the major oil companies that has no nuclear business whatsoever and only a little bit of a coal business. They're involved in a little coal on the margins. And they looked at a relatively modest cap-and-trade over a 30-year period, and they did the modeling on what the carbon cost would be, and when you look at that, the cost of building with -- a conservative cost estimate of building a nuclear -- a new nuclear power reactor compared to carbon cap-and-trade -- I mean a carbon capture and sequestration at coal-fired plants, suddenly nuclear becomes viable, and they believe it's the case, and they're essentially -- even though they don't have -- they're not in that business, they're essentially thinking about and planning for a nuclear future. And that was very compelling to me. A business that they're not in and they don't have any -- they don't have any interest promoting, giving briefings around saying that this is coming.

MR. DIONNE: Deutsche Bank just came out with a study reaching the exact same conclusion, and it's -- a lot of its rationale was

that a lot of the commodities that go into construction, the nuclear power plant, have fallen so dramatically that they argue just in the last 18 months the economics of nuclear have changed dramatically while people are still -- particularly critics -- are still looking at the old numbers. Now, obviously if we resume the world economy and those commodities go back up, you're going to have the same problem you did before.

MR. ANTHOLIS: The thing that's fascinating to me about it is not necessarily that the economics are there or that they think the economics are there but they are telling people that the economics are there. Oil and gas companies clearly want to shift the focus from them, for good reason. They've been -- and what you're going to start seeing is a shifting where in the public mind it's all been about the oil companies, and now we're going to all start to learn about the coal companies and about the nuclear companies, and the understanding of the energy industry I think, in the public mind, is it going to become a broader and more nuanced one.

MR. DIONNE: This is very interesting. Environmentalists walking hand in hand with advocates of nuclear power is the future -- is what -- is the implication of your answer.

The gentleman right there. Oh, okay, go ahead, and then the one behind him.

SPEAKER: I have a more local-type question. It's pretty clear now that at least the technology and to some degree the implementation of plug-in -- the hybrids -- is going to proceed, and it's going to be fine for local travel, but for longer travel it's not -- the batteries aren't good enough, but they should be fairly soon, and the government could really facilitate their development if they put electrical recharging stations about every hundred miles on super highways. That would encourage the development of those cars and keep people buying them. Do you think that's a reasonable idea?

MR. DIONNE: Go ahead. Who --

MR. EBINGER: I think it's a very reasonable idea. I think -- just to note that Mr. Obama, you know, does demand that cars made after -- I think it's after 2012 that all new vehicles must be flex-fueled vehicles. So, obviously if you're going that way, you're going to have to start thinking about a recharging system. So, I think it's an excellent idea.

MR. ANTHOLIS: And I think the way most people think about the plug-in hybrid as becoming commercial viable is that there's a supplementary gasoline-powered engine that essentially recharges the battery. It still runs as an electric vehicle but it has this little -- and that you can get -- in the prototypes you can still get 200 or 250 miles without refilling that little tiny gas engine.



MR. ANTHOLIS: Hattie.

SPEAKER: Hattie (inaudible), (inaudible) Resources Institute. I wanted to ask you all to talk more about carbon capture and storage. That's sort of the big issue in terms of coal, which is the big issue, and none of you have spent much time on it other than to suggest that there needs to be a big meeting about it. But I'd like to be filled in more on what you think the status is technologically, because it's kind of the key.

I've got one more thought, if I can, about nuclear, and that is I'm beginning to hear people say well, you know, about Yucca Mountain and the political issues surrounding the waste, maybe it's not such a bad idea not to sort of put it all in one place. We'll kind of keep it around, you can keep -- it's -- you can see where it is, you know, the way it's stored now it's pretty obvious where it is. Chances are in another several decades we'll figure out some truly viable way to store this terrible stuff, and in the interim maybe this isn't so bad. I ask this question from the standpoint of someone who use to be in the streets demonstrating against nuclear power. I'm now looking for a way to change my mind.

MR. DIONNE: Do you want (inaudible) CCS or do you --

MR. EBINGER: I don't consider that my strong suit, but -- go ahead.

MR. ANTHOLIS: I think that anybody -- if you take a management consulting approach to the issue of carbon as a general matter, we don't know yet what the 80/20 rule provides, right? The management consulting focus on 20 percent of the problem and 80 percent of the solution lies there, and one might jump to the idea that carbon capture and storage is that silver bullet, to switch metaphors. But it's not been demonstrated yet. We don't know that it can absolutely work in a commercially viable way. That doesn't mean we shouldn't experiment with it in a pretty big way both in terms of investing and sending a price signal that would start moving it in the direction of being commercially viable. But we can't -- I don't think we can rely on it as the thing that said coal is indispensable, and it's also potentially catastrophic for the planet. So, we have to pay attention to it and give it a shot at succeeding. There are some people that will say don't invest in that it, invest in a thousand other things because it's not going to happen. I don't think we have that luxury. I think we have to invest on it, but I also think you have to hedge that bet. Until we know what fills that 80 percent solution space, we have to start investing in a number of different things.

MR. EBINGER: It is very interesting that a number of the oil service companies, most notably Baker Hughes, are now talking about, you know, seeing if there's -- given their history of, you know, drilling and reinjection of CO<sub>2</sub>, whether they -- this could be a new business center for them. So, I've heard at least six or seven major energy service companies that think this could be an area of business for them to go into.

MR. ANTHOLIS: One of the fascinating things for me about watching it is you have this sort of coal industry and culture and this oil and gas industry and culture, and oddly enough on this it's the one place where they're actually converging, because many of the things they have to do for carbon capture and storage actually sort of much more connect up to this other industry. It's about pipelines and drilling and all that.

MR. DIONNE: The gentleman in the yellow tie. I just -- I'd like the political realism of this report, just the sentence, "Last summer cap-and-trade legislation failed in the Senate when many Democrats from both coal-producing and coal-dependent states opposed." So, this is going to be a very important question as to whether we get to cap-and-trade.

Sir.

MR. DOYLE: Yes, I'm Patrick Doyle. I'm an alternative energy consultant. I've worked both with utilities on solar as well as wind and CCS, so the question before was really most of my question, but having done some of the projections, I mean, even with a 20 to \$50-a-ton price, coal is still is more competitive than wind and solar in many instances, and we know in Europe they've had a price on carbon for a while and I've just come back from the U.K .and there's almost no investment in CCS technology demonstration because of the huge billion - - you know, hundred million dollar to billion dollar cost, so what do you think the U.S. government can do to further that aside from a cap-and trade, which is probably not going to provide the price signal. And then if you've already answered that question enough, I'd be interested in what you think the government can do on transmission investment given that the U.S. government doesn't own any transmission outside of the large power authorities out west.

MR. DIONNE: Thank you, and the gentleman in the back in the blue shirt is next. He's been very patient.

MR. ANTHOLIS: I guess my gut on that is you -- without looking at the exact numbers that you're talking about, using Europe as an example is not going to be as illustrative as we might like it to be both because the price signal is relatively short term. It was one Kyoto budget

period of 2008 to 2012, and it wasn't a particularly deep one, and, you know, as a former American negotiator staring across at the Europeans, we all knew that they had a fairly easy time to get to their Kyoto targets because they had already shot down coal mines in Northern England, Scotland, because East Germany's economy -- it collapsed and because France had already gone nuclear. So, using the current price signal in Europe as a sign of whether or not people are going to invest in CCS is something that I'd just put a big question mark on. In the United States I think the key to driving that kind of investment in coal technology of whatever kind to deal with carbon control is going to be driven by the long-term price signal. Thinking about it over a 30- or 40-year investment cycle and thinking about what that price -- a carbon level or I don't believe they're going to go in the direction of a carbon tax. But whatever that price signal is, it's sort of life cycle of an entire investment in a power plant, it's going to look like. That's what going to drive it.

If you end up having the political will and ability to actually option the permits as oppose to allocate them, you've then created revenue that you can target to the kinds of R&D that could have a chance of succeeding.

The other alternative is to allocate some of the permits to the energy companies, and I think there's hope and fear. The hope is that they use

that, those allocated permits to invest in new technology. The fear is they say: Screw it. Coal is dead. It's not going to happen. We're going to go in another direction and invest in other stuff that we think works.

MR. DIONNE: Sir.

QUESTIONER: Adam Siegel, Energize American Energy Consensus.

I have to say, listening to this I feel like it's very much a satisficing.

MR. DIONNE: A what?

QUESTIONER: Satisficing, that this was 90 percent written dependent on it didn't matter on which president was going to be elected and for a variety of reasons a number of the words said right now and a number of the words in the paper.

But let me throw out, because it's been the past two questions, for example, coal is indispensable. Last night, I was at a very positive-looking Better Place discussion, about the fifth time I've been with them.

Or, if we take Google looking at renewable energy at a price less than coal, if we take the hundreds of billions of dollars of investment it would take to research and develop on the possibility that the PowerPoint slides related to carbon capture and sequestration would work, where would we be with the pricing of renewable?

Google is making a billion dollar bet that they're going to be able to deliver renewable within five years at lower than the cost of coal. They

may be totally wrong, but Google has done pretty well in its investments in the past.

Also, carbon capture and sequestration, we look at there are a lot of developments going on for carbon capture and reutilization, a good example being the people playing with doing algae using smoke stacks out of. If we think about that, that can end toward being an ever increasing bio base for the electricity of the algae, and then you feed algae feed stock right back in, and you could have very quick, very large reductions. Instead of the carbon being treated as a waste, as an additional cost, it becomes a resource that leads to a benefit.

Those are the sorts of the things that Google, renewable energy less than coal. That's a way to beat it in India and China. That's their path. A reutilization is away to beat it in India and China. They're much more positive paths to be going, both in terms of thinking.

And, I really must say that listening to this, I wonder how much different the words would be if it were a McCain Administration that we're looking toward. I don't think the words you're saying would have been all that much different.

MR. DIONNE: Are you too gloomy, this panel?

MR. ANTHOLIS: I guess I sort of embrace that as a badge of honor. I think that, look, I said this before, and friends that were supporting of Senator Obama were sometimes aghast at this. I think John

McCain probably, in some ways, had as easy if not an easier chance of getting something done on climate change because it was going to be easier for him for the few conservatives or Republicans that wanted to do something about climate change to follow him in that path than for Senator Obama.

Now President-elect Obama's margins were much bigger than I thought they were going to be when I was making those kinds of statements. I think the thing that he has, the wind that he has in his sails, to use a renewable energy metaphor, is both the big majority that he has and that he outdid a lot of very narrow congressional seats in his margin in those places.

I live in Charlottesville, Virginia, right. We just elected a Democrat in a seat held by a Republican for the last 15 years or 16 years. He won by 800 votes where Obama in that district, which has not been won by a Democrat for as long as I can remember, won 54 to 46.

And so, when Obama goes into those places, he actually has potentially on this issue -- I mean we are right bordering coal parts of Virginia -- has an ability to move the public a bit. That is something that maybe makes up the difference of the 90 percent of this memo that would have gone to Senator McCain. I don't think that's a bad thing. I think it's a sign that the American political center has moved on this issue.

MR. DIONNE: Thank you.



The coal in his furnace, the fuel in his tank or the wind at his sails, you choose, please.

QUESTIONER: I hate to glom on, but I am going to glom on a little bit. I did want to raise the question of obviously the cheapest way to reduce emissions from coal.

Sorry. I'm Amy Christiansen with my own advisory firm on climate.

The cheapest way to reduce emissions from coal, of course, is our energy efficiency. And so, as we look at the kind of investments we have to make around the grid as far as smart grid and large-scale transmission and the costs declining that we're seeing in the renewables industry, the increase in plug-in hybrids coming onto the grid, just I hope that in Washington we'll have something like an Office of Technology Assessment or something that we can trust to do the kind of analysis on where is the smartest investment play here for the federal government and how can we ensure that the federal government isn't kind of knee-jerk reacting to say, yes, we need to throw a bunch of money at CCS whereas there may be some more cost-effective alternatives that can more quickly come online and more cost-effectively going forward.

And on the politics of climate, I feel like we all think that Obama is coming in and maybe he can make an incremental shift in the politics on the issue. But I actually think that combined with his leadership and a bill where we actually have some time and some transparency behind a cap

and trade bill that shows here's where the income from the auction will go to the states and in what way to compensate for the cost increases.

I think the dynamic can shift fairly quickly, and I just want to bring a little -- I'm not here in Washington, so a little outside Washington. I actually worked at Google, so I have a little bit of that perspective.

Thanks.

MR. DIONNE: Thank you.

MR. ANTHOLIS: Do you want to say anything?

MR. DIONNE: Suzanne, yes, we haven't heard from you.

MS. MALONEY: Let me jump in although I think everyone really is talking about the kind of climate change issues rather than about either of the geopolitics issues.

But I do want to just stress that when we talk about a sort of realistic outlook here in terms of what the energy picture is going to look like, that's based on a wide range of assessments. I don't think you'll find vast disagreement with the conclusion that for the foreseeable future, oil and gas, petroleum-based sources of energy are going to comprise the vast overwhelming majority of developed and developing economies.

So that reality is something that we're going to have to deal with, that the Obama Administration is going to have to deal with when it confronts an array of challenges around the world. That is unchangeable by human action apart from some sort of miraculous technological

breakthrough.

I think as much as a new administration must be talking about investment and innovation, there has to be a sort of reality basis in all of our expectations about what's going to be possible and the way that a new administration is going to be able to deal with the international politics on all of this.

In terms of the sort of would our outlook be any different had it been a McCain Administration, I would actually take issue with that despite the fact that obviously Senator McCain has something of a track record on climate change. Certainly some of his policies when it came to dealing with a number of our allies and our adversaries would have created a very different picture for the global energy balance, and with that I would come back to the Middle East.

I think, in effect, the fact that you've got a President who will have a honeymoon around the world, who at least is positioned potentially to begin a set of conversations in the Middle East that could bring us to a more stable future, that will help create the platform for some of these other policies on climate change and alternative energy.

MR. EBINGER: One of the things I'm most worried about, maybe because I spent close to 25 years of my career working in the underdeveloped world, is how little discussion there's been during the campaign by either candidate about what we're going to do to help the 2

billion, roughly, people in the world who have no electricity.

I remind people, in many countries of the world, it's not a question are you using oil, gas or electricity? It's are you using fuel, wood, dung or some other agricultural residues?

These people are emerging economies. Some are emerging much faster than others. But if you just look at the trajectory and make even very small assumptions about their move towards fossil fuel consumption as their economies grow, because one of the first things that happens as economies grow is the transport sector takes off as goods and services finally have a way of getting to market, it's very difficult to see that petroleum is not going to be a major fuel source for the foreseeable future.

I do want to take slight exception, though, to the comment that this sounded like a McCain campaign because I do think Senator Obama has a dramatic difference than his predecessors on truly questioning: Are the projections we have about a need for new base load capacity really accurate?

I think the people in his campaign really believe and I think rightfully so that if you look at a whole slew of things like smart meters, decentralized generation, top energy efficiency in new buildings on which he is very strong. He wants buildings to be 50 percent more efficient on average than they are today and retrofit 25 percent more buildings in the next number of years. I think this is a person that's looking very

differently.

And, I think we may be surprised at the so-called big generators outside natural gas, which I think look very promising. We may find that the demand for nukes, the demand for coal is not nearly as big as a lot of people are forecasting.

MR. ANTHOLIS: I think in this sense there is an important difference too between the Obama team and the McCain team that I knew a little bit about, but I just know the Obama team better. It, to some degree, comes back to Alden's question which is that there is an extraordinary pool of people, across all elements of the transition team that's in the making and the government that's likely to come in, that got very deep on this set of issues in the Clinton years. This is where the return of the Clinton Administration Jedi is a good thing on the issue.

I mean you can go all the way to the top to John Podesta and Jim Steinberg and others that are all talked about for the new administration. They really know and understand this wide range of issues from the domestic power issues, from energy efficiency to the international dimensions of it. This is a group of people that in some ways learned by some failures like the Kyoto negotiation, which despite its many good things didn't end up succeeding in moving the American people. They know where the fault lines are, but they also know how to succeed and how to win on the issue.

So I think you have a good team coming in. Let's hope the heightened expectations around the issues aren't a bar too high for them to clear, but at least we've got a set of people that think about this in a pretty diverse way.

MR. DIONNE: This is going to be the last question for the man with the mic in his hand. What I may do is ask each of you to use his question, answer his question, of course, but also use it to make any closing comments you want.

Sir.

QUESTIONER: Jonathan Elkind, Brookings Institution.

To the colleagues up on the stage, I'd like to ask maybe a slightly unfair, kind of crystal ball question.

MR. DIONNE: It's a good question to end on.

QUESTIONER: People have written increasingly often about the urgency of a transition in our energy economy, urgency around climate change and kind of irreversibility issues including Strobe Talbott and Carlos Pascual from this institution. But I would submit that there has been altogether little impact in the consumer marketplace, at least in this country, to date.

And so, my question would be about what is the storyline that you envision for the energy transition to happen as quickly as it needs to do, responding to the realities of the energy economy that Suzanne and

Charlie have talked about. What's the storyline by which we go through this transition quickly enough in the next, let's say, decade to 15 years?

MR. DIONNE: Why don't we just go down the line. You can tell the first story.

MR. EBINGER: Well, I would take a little exception, John, to your comment that it hasn't hit down to consumers because I think if we really look at what's happened, especially in the household residential sector from 10 to 15 years ago, we have had dramatic improvements in every kind of appliance we use and have had actually very little growth in that part of the energy equation.

But one thing I would do is, and most people say we could double that again. I personally think in a number of areas, if we set financial targets so that firms that make the breakthrough get fiscally awarded quite dramatically. Put a challenge out there. In 10 years, who can make the best refrigerator or 5 years and so forth and so forth? So I think that's a critical ingredient.

I think we need some more help from the bully pulpit. I think Senator Obama is one to do that. I think if the President of the United States says this is one of the top issues, people will stand up and listen.

I think, personally, and I know this is easy to say an difficult to do, I think we need at the kindergarten level to literally start teaching our children about energy and how they use energy and what it means for the

planet and successively on up on the way and install a conservation ethic.

They did that in Egypt through soap operas. It's absolutely astounding. Every time somebody in a soap opera left the room, they said, turn off the lights. Electricity consumption dropped 15 percent over 5 years. I mean there are things you can do.

You asked for a storyline and you got soap operas.

MR. DIONNE: Suzanne.

MS. MALONEY: I guess I would offer maybe two alternative storylines specifically from my kind of parochial area of interest, the Middle East.

One is that you can see, sort of as I said, building blocks from this vast boom over the past few years of a virtual cycle in the region where you have kind of rising standards for economic investment and development in the Gulf. It spread across the region where that in fact induces moderation among some of the leaderships, where it creates new cooperation among old adversaries, investments in conflict zones and former areas of conflict and where you see a shift like the sorts of investment by the United Arab Emirates, for example, in potential alternative technologies and at least rhetoric that's come out of even the Saudi Oil Minister about the potential for solar energy, a shift from really petroleum-based economies to one that is more broadly based.

All of this creating the kind of infrastructure and investment in



human capital that is so greatly needed throughout the region. So I think you can see at least the beginnings over the next 10 to 20 years of potentially a very good story coming out of the Middle East.

At the same time, I think you can also make probably an equally credible case for a negative scenario. Unfortunately, our history with the Middle East suggests that may in fact be the more likely one, which is that both the volatility and the massive revenues that the region has experienced over recent years are going to do very little to create the kind of real reforms that bring about popular participation, that bring about sustainable growth.

We know that both empirically and theoretically there's very little evidence that oil wealth does create either the basis for democracy or the basis for sustainable growth and that what you see is a sort of Iran on a wide scale, which is not to say the Islamic republic's rhetoric but the kind of wild spending sprees and populism and demagoguery that we've seen in Iran under the leadership particularly of Ahmadinejad in the past few years.

That kind of politics just exacerbates the youth bulge, that we're seeing the kind of productive investment that's needed but just hyper investment, hyper inflation and, really, the precursor to what we saw of the region in the 1970s, a lot of wasteful spending, and all that of course contributing to some of the longstanding triggers for instability across the

region. I think, in effect, you could see a very vicious cycle that were to be launched in the region.

The real challenge for the new administration is to begin a dialogue and to undertake policies that are going to nudge folks in the more virtuous direction rather than the vicious direction.

MR. DIONNE: Thank you. Bill.

MR. ANTHOLIS: Well, I'm going to end on a positive note which is to mark how far we really have come in the 13 or 14 years that I've been paying attention to this broad set of issues, and it's going to tee off something that Charlie said.

I have a kindergartener. I actually have a first-grader now. But when she was in kindergarten we got in the car, and it was a hot day, and we were driving to church, I think. She said, turn off the air conditioning. Open the windows. You're contributing to global warming.

I tried to explain to her, I gave at the office that day, but that didn't really cut it with her. But the fact that she is focused on it and she knows about it and she didn't even know that I worked on it and I was focused on it and knew about it, it was probably an even more telling statement.

But for the storyline going forward, look for the hybrid minivan. They have them in Japan. They don't have them in the United States. Why is that? It's because Japanese car makers think they won't be able to sell as many of those cars in the United States, that we want bigger

cars in the United States.

I think we're not far away from consumer demand for the hybrid minivan. We have hybrid SUVs. We don't have the hybrid minivan. Why is that? That's coming.

We've moved on compact fluorescents at home, certainly in offices, increasingly at home. Energy-efficient windows are increasingly adopted at home. Solar roofs are not yet adopted at home. When you see that coming, you'll have a sense that it's continued to move in the right direction. So that's at the household level.

Think about it at the city and state level. I think we're verging on a consciousness point where five years ago people would have thought of New York as the energy-efficient city because of subways, mass transit and L.A. is not the case. Well, it turns out, thanks to a Brookings study on this, that New York and the L.A. region all the way to Las Vegas, by carbon footprint, are terrific compared to Washington, D.C.

Why is that? Because if you take the entire carbon footprint, it's not just driving patterns but it's also where the energy is coming from. Out West, there's more hydro. There's more nuclear.

People are going to start paying attention to it at the region. What is our regional footprint? What can we do to address that?

And then go to the national level, and I think about the Congress and where we were 12 years ago. There was a very famous meeting,

including by a colleague that's here in the room who I won't point to, where Al Gore sat down with a bunch of environmental groups who said, cap and trade, cap and trade.

And he said: That's great. I want to do that. How many votes do we have?

We have Paul Wellstone.

That's great. Who else?

And there was sort of dead silence in the room. I mean I think the folks in the room were doing exactly what they were supposed to do, and Al Gore was doing exactly what he was supposed to do.

We're in a very different place from that. We're very close to passing some kind of cap and trade legislation, and that's an extraordinary accomplishment after 10 or 12 years and in some ways helped by how aggressively against climate change the current administration was in its first few years.

I think the idea of having a President who is elected with the incredible coalition that he has, that reaches into the South and Southeast, and we might not that Virginia and North Carolina and Indiana are coal states. So that he's put together coalitions in these states that are going to need to be moved on this issue is a really important thing, and you just need to keep building on the progress we have.

MR. DIONNE: Thank you so much.

A soap opera, a war movie and an inspirational family story combined with a regional tale. This is a great panel. I love Brookings panels because the panels are great, but the audiences are incredibly well informed.

And, Bill, I urge you to reconvene this in Copenhagen in December, and I want to come.

MR. ANTHOLIS: All right. We'll be there.

MR. DIONNE: Thank you all very, very much.

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## CERTIFICATE OF NOTARY PUBLIC

I, Carleton J. Anderson, III do hereby certify that the forgoing electronic file when originally transmitted was reduced to text at my direction; that said transcript is a true record of the proceedings therein referenced; that I am neither counsel for, related to, nor employed by any of the parties to the action in which these proceedings were taken; and, furthermore, that I am neither a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

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