

**Western Governors' Association
Plenary IV – Energy and Climate Change
Tuesday, July 1, 2008**

Transcript of discussion

Governor Freudenthal: I am supposed to kill time. Thanking you Jeff, while they move that out of the way. So, thank you very much and I understand that our new Chairman will manage the discussion henceforth.

Governor Huntsman: Thank you outgoing Chair. Yes, these discussions have a way of managing themselves. So, I'm not sure that any Governor here, we don't lack for self-starters in this room. Jeff, thank you for that excellent, excellent presentation. And we've gone Erik, from the global to the national and now we're back in the great state of Wyoming. So, hang on for the ride. And we've been reminded of the importance of technology, innovation and how that relates to economic development. And if we do not act how someone is going to capture the moment Jeff, thank you for reminding us of that reality.

Now we as Governors we live in the real world. When people look to us they expect the lights to go on and for traffic to flow. And when things don't happen, they hold us responsible. And I think that's a very unique position that we all find ourselves in.

So, let's have a discussion about energy and climate change. But let's stay focused on a deliverable, something that I think this group should think more and more about doing, because we are uniquely positioned not just geographically as a group of premiers and governors. But also in terms of the calendar with an election right around the corner. And we all know that nature abhors a vacuum and so does politics. And if that vacuum which is not filled in the space of energy and climate, someone's going to fill it, and who better than people representing probably 40 to 50% of the energy in North America, people sitting right around this table.

So, just to kick off this discussion, and you all follow in the line as you will. I would like to ask Jeff, who was with us yesterday, patient and diplomatic as he was. And Erik, maybe you can follow on. This group is very, very serious about putting forward a policy recommendation to the next administration. Now we've never done anything like that before and I think it's a novel approach, but I think it's something that we need to do as an organization.

So let's just assume that we can get our act together as western governors and premiers and start making concrete recommendations in terms of an energy policy. There may be things that not everybody can agree to around this table but chances are these are big issues of our time.

Affordability, let's not forget about affordability and the consumers who are out there paying, \$4, \$4.50 per gallon and don't know the reason why. And energy independence, something that everybody is terribly interested in, and third, emissions now you are entering a world in which we can somehow deal with a 100 years of industrialization in this country.

So I'll take it back to where I left off last night with the analogy of the moon shot. John F. Kennedy giving that great speech at American University in 1961, it was elegant in its simplicity and here is one of the challenges we are up against. You know when you say "I want to put a man or woman on the moon and return him or her back to earth safely", everyone understands that. Adults, kids everybody understands and gets excited by that vision and it happened.

I don't know how you articulate something as complex, as confusing with so many moving parts as energy policy and climate change and expect people to kind of rally around a common vision. So maybe we can start with how do you define in political terms as we approach November, as we roll out the content of an energy policy, how do you put it in terms that people actually understand? But I think what we're interested in more than anything else is a little bit of advice from the three of you and Jeff, I think gave us a great start. What should an energy policy that does hit on climate consist of? What does it look like, what are the chapters of that book, what are the must haves at this point for a new administration?

So if we are talking about the moon shot or the Manhattan project, whatever -- however you want to term it. What are the must haves in the first year of any new administration that we need to articulate carefully in such a roadmap policy manual? I'll start with that and just maybe Jeff let you start and then we will open it up to all the rest of the participants from there.

Jeff Sterba: Well, Governor like yesterday you have an amazing way of putting your finger on the tough question. I would put two, maybe three pieces out there. The first piece would be for the Governors of the Western States to recommend that the new President take the lead in greenhouse gas legislation. And the reason is we've got a polarization in Congress today. We have a number of people that are proposing and wanting to do it on what I'll call almost a theology basis, and we have a number of other people that are opposing it or are not willing to sign on, maybe a few it's theology, but others it is practical.

And the way to break that is for someone else to come in the middle. Good policy is made in the middle. It is rarely made on the extremes. You have to have the extremes to get to the good solid elements of policy. But -- and I think it's going to take the new President coming in with a very well thought out plan -- to bring the extremes back into something that can truly work. But what that has got to be is a true genuine commitment to be economy-wide, to use market forces, to price carbon, to recognize the affordability issue that you mentioned and associated with it and this is where energy policy comes in.

It's the need for a transitional mechanism that recognizes we've underinvested in technology and we have to step up to a much greater degree to that technology. And it's not as much on the research side, it's on the development and demonstration side and the problem with that piece its big dollars. So the second piece is we have got to change the way we invest in technology. It cannot be subject to the kinds of vagaries of appropriation, where it's up and down as it has been in the past and particularly more on the downside. We've got to create a different kind of a public-private partnership for the investment in development and demonstration. The third piece of the recommendation -- in my thoughts it goes to this issue of affordability -- to me it is without question that energy prices are not coming back down at least not until such time as we have new technologies that are not dependent on the things that are causing our prices to go up

today. And remember, that's not just fuel, that's fundamental infrastructure investment caused by copper, steel, aluminum, cement and gasoline. Those five primary inputs for the energy sector, certainly my sector are the main drivers. They are going to push energy prices up and the more we don't recognize that that's the future we have, the less we are able to deal with it.

So that leads into something different than Jimmy Carter standing in front of a fireplace, putting on a sweater and say, you know we all have to conserve, turn your thermostat down. There is something more fundamental and this goes back to technology. It's how we can become the world's most energy efficient community, society and that is a challenge. I think that can be as big a challenge as the one associated with the investment in broad energy technology and taking a leadership role in climate change. It cannot be acceptable policy to say, well, we'll do climate change when China and India do? That's not leadership.

And I think, whoever you get as a President, once they take that leadership, they have got to be able to weave that political piece of finding middle road, and I don't mean middle road in terms of the extreme views. But, I mean there needs to be a change, because the week that Lieberman-Warner was debated, was not the U.S. at its best. And we only got another shot, let's do it right.

Erik Peterson: What strikes me in looking at the global trends that I tried to talk about are the tremendous complexities that exist between food, water and energy. And what also strikes me is that, if we look at the basis of U.S. international engagement right now, that in effect we don't have the kind of imprint that we would like to see in all of these areas. I regard this as a tremendous opportunity in terms of whatever cadre of individuals come to Washington in January. To try to restore, as Jeff suggested, some of the leadership that I think we can move forward right now.

I've done some writing. We've got a project at CSIS, it's called Smart Power, this is the one in which Governor Huntsman was kind enough to contribute his speech a few days ago. And I've suggested an Earth, Wind & Fire policy, where the U.S. thinks about a more general look at broader resource issues looking at -- that's the earth, the wind as broader environmental issues, where you take the kind of leadership that Jeff Immelt talked about.

And then, there is this fraying nuclear non-proliferation framework. What a wonderful opportunity it is for Washington to take significant leadership positions right now across the world. I'm not here to be partisan in any way. I think this is something where we can establish across the political consensus to a large degree going forward in the spirit. For example in the case of non-proliferation, in the case of Kissinger, Shultz, Perry & Nunn the article that appeared a little more than a year ago. I think we can forge very strong common ground to go forward and clearly natural resources has to be a core.

Governor Huntsman: Jeff, anything you'd like to add to that?

Jeff Imelt: I think there are probably five or six elements to a National Energy Policy. I think the first one would be a 2020 vision on the mix of fuels. So, I think standing up and using kind of the national platform, say by 2020 we'd like to have 25% nuclear, so much coal, so much renewable, so much gas and here is our vision.

The second thing I'd do is create maybe a national renewable portfolio standard. I would take standards like RPS or something like that and I would make it national. And at the same time, I would have a vision for the national grid. So I would use a pulpit that would say, here are some things that ought to be driven either across these States. The third thing I would do is, I would create tax incentives that would reduce the cost of these technologies, promote conservation and really try to drive those things that can incent the right behavior, and you know sunset them at some point but say, hey, for the next 10 years there is going to be a production tax credit, there is going to be an incentive for conservation things like that.

I would adopt a price for carbon, you know what Jeff and I've worked on and I don't know what the right level is but some glideslope for carbon and then I would really try to reorient the colleges in this country to really focus on this topic. And I would find ways to use this great educational system that we've got and there is probably stuff that I am leaving off.

You know Jon I think it's really that four or five or six key things that would at least provide. I think the tapestry of leadership that everybody could kind of say, you know hey, makes sense, let's give it a shot. You know I think today coal plants aren't being permitted, we kind of default into gas or wind or other things that -- and look if we build every nuclear power plant in this country that we can envision today. The nuclear power as a percentage of the total in the U.S. would still decline by 2018. So the notion that there some cavalry or some silver bullet out there just doesn't exist. So we need to be doing a lot of things, I think we got to start now and we got to be doing a lot of things all at the same time, fundamentally.

Governor Huntsman: Governor Napolitano.

Governor Napolitano: Thank you. Really great presentations, thank you very much. But I pick up some internal inconsistencies and I want to plumb those a little bit. One is, "governors are really important but standards have to be national". And I think we as governors will say well then we'll write the national standards amongst ourselves and just take them to Washington and maybe that will be our role over the next year. But there is an inconsistency there. The second thing is, where -- Jeff you mentioned the role of market forces, and one thing I've been curious about is -- where is the venture capital, where is the big private capital in terms of technology innovation and implementation, the second prong of your analysis. Why is it that -- what you're telling us is that the governments either state or federal through tax incentives have to in essence through that process provide the kind of tax payer venture capital for these projects. Where is the private money for this?

Jeff Sterba: Governor, I'll take a shot at both of them. I certainly understand the point of inconsistency. The problem that we have is there's some -- there's many areas where you can manage a patchwork of different approaches. But when we come to climate change, global and putting a price on carbon we can create enormous, not just inefficiencies, but really bad signals that will occur in different parts of the country because of different policies put in place.

Ideally you would move to a global kind of a system and many people still envision that I think that's a long ways off. But I think the power that the Governors have is to come forward to DC and say look, if you don't do it we will. And I think that's been the value of having RGGI of having the western states push on the development of a program. But if it actually gets implemented I think we're in for a morass. Just think of RGGI is getting started and we expect to see prices depending on the state. Because it will be different state-by-state within RGGI of anywhere from 2 to \$7. It will be low -- I'll call that low. The things that we've looked at that are coming out of California are anything but so we will end up with very odd incentives. If we don't approach that issue at a national scale.

On the second one, where is the private capital? There is a lot of private capital, that's flowed into clean energy, but it's flowed into clean energy on small-scale concepts that are largely research and some demonstration but they are small technologies. When we talk about carbon capture and storage, when we talk about how -- well just take carbon capture and storage, we are talking about having to do demonstration at a scale that's enormous.

For example, the largest facility that exists today for carbon storage is about 1 million, 1.5 million tons in total. About 100,000 tons a year of injection. A single 500-megawatt coal plant is 4 million tons a year. So that is the scale of what has to be looked at. Now there is talk and there is some movement on larger scale projects. I think one of the ways to mitigate those costs is to broaden the willingness of the United States, Canada and the EU to not only share results but rely on each other's results.

We put an enormous cost burden on our countries by not necessarily relying on what other countries have done at least here in the United States. So there is a large amount of private capital that's moving in there is some fascinating things coming up. But can they move the needle fast enough? No. They can be the engines that will help in 2025, 2022 and the longer run there is some fascinating things being done on the nanotechnology that is getting a lot of private dollars. There isn't a need for major development and demonstration. When we take a look at the next vintage of nuclear facilities, there is going to have to be some level of support. Today congress has looked at it just in terms of loan guarantees because otherwise the risks that are associated with it are too big. People will -- the private capital will not flow into it. The debt market has said very clearly, without having federal guarantees, loan guarantees the debt can't come to the table. So that's where, it's a very different kind of way than we have done it before. It's not DOE research it's facilitating the investment for demonstration and development costs.

Jeff Imelt: Jeff nailed it -- \$3 billion went to clean energy venture capital last year, which was a record year. One nuclear power plant is probably \$6 billion in and of itself. So it's the scale in energy is unlike information technology or healthcare or other businesses. But I do think that innovation from the venture community in concert with maybe bigger companies the combination is going to be powerful as time goes on. And I think you are going to need both.

Jeff Sterba: You know Governor, just an example. I'm looking at a technology right now that is -- the contention is they can make a block for construction in which the carbon from CO2 is captured within that block and will be stored forever, and that's a fascinating new kind of an idea. We're actually utilizing something that we are concerned about. But that -- but to take that idea

and move it forward from a scale perspective, so that it really can have an impact that's quite a ways off.

Governor Huntsman: Governor Schweitzer followed by Premier Campbell, and then Premier Wall.

Governor Schweitzer: Couple of months ago, I read that one more Japanese soldier walked out of the jungle and said, okay, that's it, I'm calling it good. During the first few years after the war, there were thousands. Today we're talking about energy production, cleaner energy production -- American cleaner energy production. But we're getting mixed signals. Those of us who are around the table, we hear other signals.

Just three years ago, a large part of the utility industry, large part of the hydrocarbon industry in North America were officially denying that carbon dioxide played a role in climate change. So here we are embarking on making recommendations for the next administration, assuming we're going to embrace that this is the most important energy **quarter** on the planet both in terms of production and consumption, uranium in Saskatchewan, wind, most significant solar radiation area on the planet, our ability to produce oil and coal-gasification, and yet many of our partners, many of them who're here today are sending mixed signals.

Congress is not so dissimilar to the Japanese soldiers who were in the jungle; they don't get the communication from headquarters. We still have groups traveling across this country, right now, that are financed by some energy companies, financed by some utility companies that are saying, well, it's junk science and so now we have legislators in each of our states who mimic that. We have members of the Congress who say it's junk science. Well, if we're going to have a principle that says, we're going to be the energy corridor both in production and consumption that we are going to mitigate the effects of carbon dioxide that the way we consume will be cleaner, greener and American. The way that we produce will be cleaner, greener and American. And we're going to make that recommendation to Congress, we need all of our partners involved in this, we are governors of all of you.

And so if the debate is still going to be on one side as junk science, and on the other side it's not. We can't move forward and we will be stuck in cement for another five or 10 years, meanwhile this technology will be developed in Europe and Asia and they will export it all over the world. We cannot allow this debate to be the same as CAFE standards that has put the American automobile industry out of business because the rest of the world rapidly moved to more efficient cars and the American manufacturers said that be damned we will produce the V-8s. My point here today is to all of you who are present; be our partners, help us, as we develop this protocol that we bring to Congress. Because we governors can't do this alone and I understand there is going to be the right side and the left side and the middle side of this debate. But there are a few principles that we have to agree on, is this the most important energy corridor on the planet? The answer is, yes move forward. Will we consider all of the resources available to us; wind, solar, nuclear, oil, gas, coal gasification? If we can agree on all of that, then can we agree that carbon dioxide plays a role in climate change. If we can agree to all those things and we can put together a protocol and take to Congress, if we can't, we're going to be bogged down before we even get there. That's my point.

Governor Huntsman: Any responses from our panels? Other than Amen.

Jeff Immelt: I'm not running for anything. I'm with you baby.

Jeff Sterba: If you were he'll beat you Jeff.

Governor Huntsman: Let's go to Premier Campbell.

Premier Campbell: Well, thank you very much, and thank you to the presenters. I particularly like the Dartmouth presentation. I thought it was superb, being a graduate from Dartmouth I just thought you are very thoughtful and insightful. I think the real challenge we actually have in this room and across our country and your country is whether there is really a problem. I think there is a difference between what President Kennedy said -- and what he said is we are going to the moon and we're coming back safely. And there wasn't a discussion about whether you're going to moon and coming back safely. We're going to the moon and coming back safely.

We sit today in a glorious part of the world with all the water resources we need, all the energy resources we need, and frankly all of us particularly those gray hair guys like me around this table, know that if we don't change now, our kids don't inherit this world. You started on Sunday with a great discussion about wildlife and all these things that define us, and we know in our hearts that if we don't get our waters properly managed and properly organized its not going to be here. If we don't get our energy properly managed and properly organized its not going to be here. If we don't actually face up to the fact that the climate is not changing, it has changed. In my province, we have lost 80% of the forest, because we had a government that for a decade said let's wait-and-see for the cold winter. We don't want that to happen.

So it seems to me that Governor Huntsman is correct. I think that we have to take the steps. And what I would say to Jeff is that, when you decide to discuss one side like it's theology and the other side like it's not, you belittle both sides. And it seems to me that what we have to do is recognize we are all in this together if we're talking about a public-private partnership. Let's get into the partnership as equal partners with mutual interest, and mutual benefits. I don't actually look at this as a challenge between the north side of the border and the south side of the border, this is a challenge for all of us, and there is no place in the world that is better positioned to take advantage of the opportunities in front of us, than the United States and Canada, more specifically, the western part of the United States, and the western part of Canada we should get used to leading. There is not one person in this room that walks into a bookstore and says, I want to go to the shelf that says let's find followership for 21st century. Who are we going to follow? From my election I want to tell everyone I'm going to follow into the future. We are not followers, we are leaders, we should lead, we should act, we should do and we should do it together and that's how we are going to get somewhere.

Governor Huntsman: Did I say we didn't lack for self-starters in this audience. Any comments at all from our panelists there, other than Amen. Amen to the Premier. Premier Wall we'll turn it you.

Premier Wall: Thank you very much Mr. Chair and let me just invite all of you to celebrate with us on this Canada Day, July the 1st. I think how you have framed the discussion is there is a real advantage here for all of us because we can all think of different ways that we would may be present that argument to either may be a future President or even a Prime Minister in Canada as to what the moon shot description is. I just want to offer this and it's something that I tried probably inadequately to raise yesterday. I think it speaks to how you also began framing this discussion remembering our constituents. Remembering those who are being buffeted now by very, very high-energy costs.

In our country, when we do the conversion, it's \$5.60 a gallon and we know what's going to happen with respect to natural gas to heat our homes and electricity going forward and so that affordability piece is very important but also offering, asking the question what advice you'd offer to a President with those folks with the constituents in mind. I think it is very important because I think there are certain concepts that they already readily embrace, I think probably they're ahead of most of the politicians in North America here and those would focus on the technology side I would submit.

I think there is an intuitive understanding of this -- of carbon capture and storage and if there isn't it's not hard to get there. I think there is an intuitive understanding on the part of our constituents about hybrid cars and vehicles because they are already buying them and they understand the potential for a fossil fuel free vehicle for personal transportation within short order. They understand the options for nuclear, I think they understand or perhaps would with a simple reminder about the opportunities around fusion.

And so I think, I hope, that this organization --and Saskatchewan would like to certainly play a part here and will -- as part of its efforts in this regard in developing this energy corridor that we would focus on this -- on the opportunities around technology and that heaven forbid, we would all be testing the same things that we'd find out what's going on in carbon capture where Wyoming's demonstrated leadership where Saskatchewan has perhaps the largest sequestration project in the world. Alberta is already engaged so is BC and Edmonton. I'll let Ed speak to that but I think we are going to even see more progress there and more leadership from Alberta but let's make sure we have a co-coordinated approach, that we're cooperating. So that we can get to the answers a lot quicker and that advice then, I think, is much more meaningful to those who represent and those who want to have affordable energy, cleaner energy but one that doesn't kneecap our respective economies which are growing and providing leadership on this half of the continent. And thanks for the chance to intervene.

Governor Huntsman: Now we're getting some place. I think points are very, very well taken and as Jeff would tell us any time we have duplication of efforts it's going to cost you in terms of your price per share and given what's happening, North of us in Canada, given what's happening in our individual states with respect to emerging technologies, it's a very exciting period. We need to better understand what we have and when it's going to be ready to be deployed and begin working together and who better than the WGA to make that happen. So, prerogative of the Chair, I have got another question to ask and then we're going to continue with us some of my colleagues here.

I'm so terribly interested in this document that we will be drafting and preparing and I want to get back to that for just a second. I want to ask our panelists about the current federal government construct, the organization, the governance of energy policy and whether what you find today is adequate and if not what recommendations would you make for a federal government reorganization such that we could more adequately and competently deal with the changes that need to be made. Jeff, you've got a smile it looks like you want to go first.

Jeff Imelt: I'm going to let Jeff start, I'm busy.

Jeff Sterba: Oh, boy. It is very difficult to say what the heck the energy policy of the United States is. There isn't one. And that's very unfortunate, and I got to say it's not without the efforts of some people, and I'll just pick on my two senators Jeff Bingaman and Pete Domenici, who have really tried, but we don't have one. We don't have anything that is close to it. And I think Congress has got to take a role, but the administrative branch has got to put something forward.

One of the very difficult pieces is the Department of Energy, and I will tell you that, I think, the current Secretary has done a very, very strong job in the face of not having a heck of a lot to work with. And I'd say that it's not a partisan statement at all. The DOE and I've talked to a number of both Secretaries and Assistant Secretary or Deputy Secretaries over the last eight years. The all don't know what to do to make it effective and efficient.

DOE does two things really well, it does research with the national laboratories very, very well. It develops ideas. The difficulty I guess there isn't a process to take those things and move them into policy. And then -- and the second what they don't do well is to take the research results that they get and move them into practice. The private sector needs to do that or a public private partnership depending on what the level of investment is. This President tried to do something and again this isn't a partisan statement, but frankly having been one of the people interviewed, it was rather ineffective, this back in 2002, 2003 and the development of an energy approach and energy policy.

I think there is got to be a partnership engagement, which this part of the country can play an enormous role in, because whether it's natural resources of fossil fuel or whether it's the renewables. So unfortunately, we don't have a policy and I think the only way you're going to get one is to have it really take the personal attention of the President, who can work with both the Senate and the House to help develop one that has teeth. I mean, Jeff talked about a 20/20 plan. I think you've got to have that. I think you also have to have one a little longer-term, but it has to be -- it has to have a level of specificity, it can't just rely on markets. It's got to take something more.

Governor Huntsman: Let me just press the issue with Erik and Jeff. With respect to governance regulation oversight, the current construct, what needs to give, what needs to change, in order for us to move into 21st century from an energy policy standpoint, Erik?

Erik Peterson: Generally speaking, I see a system mired by segmentation, compartmentalization, a number of organizational structures that were developed for a time that is long since past and a government that's trying -- a Federal Government that's trying to think

about reorganizing itself to reflect the realities of the day, not the realities to come that I tried to outline in the context of my presentation.

In the end, I wish we had a nickel at CSIS for every time someone comes to us and ask us to come up with ideas for reorganization of government. Years ago, we were approached and we've contributed to the Goldwater-Nickels reorganization of National Security. Now we've been approached again and we're doing another project called beyond Goldwater-Nickels. But in the end without this constant rejuvenation of government organization to reflect circumstances then we're left with what turns into a balkanized and dysfunctional structure more times than not. We're doing work right now on broader international water issues, and that is a perfect case in point were across government agencies we'll see a balkanized framework without sufficient coordination going on. We'll be releasing yet another report I hope it leads to something. Now there are a number of significant proposals in Washington now for very big change in the **Department of Development** for example international development or range of others. But it remains to be seen who comes in and how and what kind of robust notions are applied to the people who in effect pull the trigger once the new administration comes in the game.

Jeff Imelt: What I would say is you know from 1980 until 2003, oil was abundant, water was abundant and the world was at peace and the Department of Energy wasn't that important fundamentally. Now, I would say we're in an era where -- may be there is some speculation oil price. But if you believe in the emerging market, oil prices are going to stay high for a long time. And now energy is a dimension of national security that is important.

So, the Department of Energy is now quite important. It wasn't that important for 25 years ago, now, it's quite important. It's important from a defense standpoint and it's important from economic standpoint. It should stand at really the same level as Treasury and some of the other departments. I think it can play a primary role in terms of technology development. You know, for decades the Department of Defense has really innovated technology in a very effective way, that's populated a lot of the private industry and the Department of Energy could play a very progressive role in terms of making sure that these technologies take place.

But I think we just have to recognize there is a sea change in the world that's taking place, and we need to adjust kind of classic definitions to a very different world that we live in today and the Department -- this is really important. If it's any consolation, as I travel the world there is a lot of other places that are in just as bad a shape as we are. If there is any consolation in terms of not knowing quite what to do, most of Europe lots of other places are really struggling on the same points we are. So we're not alone but I think Jon, this is really -- this is one of the two or three most important things for this country from a public policy standpoint today. In terms of what we need to do.

Governor Huntsman: Governor Rounds, Governor Gregoire who has joined us today. We are delighted to have you Christine thank you very much. And Governor Freudenthal.

Governor Rounds: Thank you sir. And listening to the discussion that goes on I'm struck with the thought that we're talking about government role in this process and yet government has never created any energy what so ever. Government's role -- we don't create products all we

provide is a service. We take taxpayer money from individuals and then we turn around and we distribute it a different way and with the expectation that there is something then created that add something to the mix that becomes either a service or it becomes a coordination or it becomes a regulatory authority. Very seldom do I ever hear anybody suggest at this level that they need additional federal regulatory assistance, and yet, we're talking about a National or perhaps an international policy that would respond to something that I think most of the people here in the room would identify as a critical problem, a shortage of energy and you know at the same time a clear understanding that we do have changes going on in the climate that have got to be addressed.

This group, as we've talked individually here among ourselves as Governors, we've kind of come to the conclusion that perhaps this time since so much of the energy possibilities actually exist here, maybe we could with your input in terms of -- folks that are out here and participating that maybe we could come up with something that we could take to the next administration and share with them as a -- not only a series of visions but one that goes a step further and that is specifics because, if you talk about the nice goal of getting to the moon, it's one thing but they've also going to have the lay out of how we get there and involves a whole lot of people that are here with us today.

The carbon taxes that I'm hearing, I always worry about because that's going to come back to and be paid by individuals that are right now are suffering with high-energy prices. We're going to have to come up with a plan that clearly recognizes the need to reinvest that, any of that tax which comes around back into the creation of energy in some form that's long-term acceptable, and my -- my specific question here and I hope I don't create a long discussion on this, but I -- don't we have to recognize as part of any policy here, the clear delineation between any new revenues that would accrue to a state or to a federal authority that that's got to go back into the energy production and into the safe energy production in the future and shouldn't that be a part of any proposals that we bring forward?

Jeff Sterba: Governor, I guess I'll be keep becoming first on the list, I guess two things. First, I think, we're as a country and as a world we're going to have to think about the funds, not just for reinvesting in energy but I do believe there is going to have to be adaptation, and there is going to be a requirement to fund whatever elements of adaptation are deemed to be appropriate. The second piece though on the reinvestment on energy, this is where I really do believe a public-private -- a different kind of a structure really ought to be looked at. There has been a fair amount of work that has been done in pulling and putting together a new entity that would be the vehicle for investing the technology funds that brings the best of the private sector to bear.

Doesn't it avoid the appropriation process, where things can get carved out, cut up and for those of us that have paid into the Yucca Mountain fund, over \$20 billion and we haven't gotten any thing out of it nor have our customers. And we don't want to repeat that story. So I think that there is really two pieces, I think it will be broader than just technology on the energy side and development demonstration. It will over time probably have to include adaptation, now unfortunately that -- not unfortunate, that opens up a huge list of things. Lot of people's pet projects but that's what government -- that's the public policy role the government plays.

Jeff Imelt: You know, I would just -- I would say couple of things, coming around the side. First, even if the government did nothing, clean energy would still be the fastest growth business inside GE. In other words, we're not waiting for the government to do anything; I am assuming that nothing happens fundamentally. And so, we still see this as being the best business we're in and it will continue to grow, I'd make that comment first. The second one is, I think, there has to be a re-circulation of whatever, if it's a cap and trade tax, back to either finding additional sources or mitigating some of the impacts that's going to have some hard hit businesses that we have to -- that we have to do.

And then the last comment I'd make is that we are, in some ways, paying the tax today for not being better prepared for where we are. And I think, not that the Lieberman-Warner bill was perfect but the dialogue, when it failed was, basically because we haven't done anything we are in trouble and because we are in trouble we shouldn't do anything. That was kind of the circular argument that you find yourself in on and this one. And so I think it's what makes energy so difficult is because every investment is 20 or 30 years. And if your only market signal is the price of oil today, frequently people will defer that decision until we are into, where we are today. And so that's where I see, like I said, we are -- we'll invest \$3 billion in R&D, just in clean energy with very low government support, we are not asking for that. It's just in a way, how could that be spent more productively, is where I think government could help industry to a certain extent.

Governor Gregoire: Well, first, I too want to join and say thank you to the panelists very much. And to say wholeheartedly, I agree we ought to move forward. But simply to say, can we achieve a consensus among us? Yes, I think we probably can, and deliver something to the new administration, yes we can. But, I don't have any confidence candidly right now that it doesn't result in the same status quo that we have today, that whatever is taken to Congress, doesn't get anything done or what gets done is nothing but mush.

And as an example of my concern is, what we are trying to do in the western states with regard to the climate change initiative. And I'm not unmindful about the number of governors struggling mightily with their own legislatures that are pushing back and fighting back and saying no thank you, we don't want to do it. And well, I'm getting a little bit of that, what I find even more interesting is, what I am getting is sectors coming in and saying, well we support you 100%, but we should have an exemption. We are exempt; you are not going to include us, right?

My point is to say, I'm behind us governors delivering something. But I think, we have to deliver something more than a consensus document and that is the hearts and the minds of the people of our respective states. So I come back to the -- I think, the original thought you had is, how do we get there? How do we accomplish that, build the consensus among our own people that they are not going to stand for inaction and they are not going to stand for mush, seen enough of it, don't want it anymore, thank you very much, let's get something going. So one thought I have, I'd like to hear from you all, is should we be asking that this document, then have people behind it who say, oh! by the way on behalf of GE, I wanted to say support it and get others, in various broad sectors around our respective western states who will come forward and say, this is not just an initiative of the governors, but it is, in fact an initiative that is supported by a wide array of people and I would ask, if we couldn't do that as well candidly with our colleagues in Canada.

But again just to deliver, I don't right now see any reason to believe delivering a document will result in the outcome we intend, without something greater and that is winning the hearts and minds and how do we do that.

Jeff Sterba: Governor that is exactly the situation that U.S. CAP find itself in. I think Jeff, we -- US CAP developed, it's document, those of us who developed it, there was about 10 company -- well, 8 companies and 4 NGOs, really believe in. But that in itself isn't enough, you then have to build momentum behind it, but you also have to take it into a level of specificity, which is the real challenge, and that's where things get tough. So I would encourage the Western Governors' Association to engage its critical constituencies to be able to support what you come up.

One of the biggest problems that I think we've had around the issue of climate change is that the issue of cost has been poorly addressed, and it hasn't been focused on or recognized and it's not an issue of "it's too costly -- don't do it". It is an issue of, this is an investment and over time there will be an enormous payback. It ain't going to happen early on. And I think the worst situation that could happen is we make good policy, but we don't sell it well, so that the people then rebel against the consequence, which may be higher prices for a period of time or will be higher prices for a period of time. That's the education process, people have got to go through with their consistencies that this is an investment worth making. The business side will follow. I mean, we will do the things that need to be done to implement that public policy. But, when customers rebel about price increases, they run to you to complain.

Jeff Immelt: When I look, I think what the governor suggested is something that we tried to do with the US CAP, which was to sign on to a set of principles that we believe were important principles and so I think it's something we rarely do, but this is one of the areas where I actually think it's useful and I would say that business in general is ready for something to happen and in other words, I don't speak for everybody, but I know enough of my colleagues to know that where we are today is suboptimal and everybody recognizes that and I think business is ready to be led to a certain extent.

And governor, look where I've been. I was selling plastics in the automotive industry when CAFE came in, CAFE was going to kill the automotive industry and it didn't in fact, we should have had stronger rules. I've been through the Clean Air Act and the Clean Water Act. Each one of these was going to destroy the industry and it didn't. We're in the business of adaptation and change. You know and we -- that's what good businesses do over time and they figure out how to make a buck and if there's no -- there is no more class competitive franchise in the world than Wal-Mart and if Wal-Mart drives efficiency by reducing its carbon foot print, I think that's pretty symbolic for all of us. And I think it's just time to get on with it and we should try to be useful.

Governor Huntsman: It's a very good point Governor Gregoire and we do need to explore how deeply we want to drill down in terms of bringing on additional layers of support. I think that's something we will definitely want to take up. Let's turn to Governor Freudenthal followed by Governor Ritter and then Premier Doer.

Governor Freudenthal: First of all, I want to thank the panel and at the same time I want to thank GM for providing the hybrid SUVs that got the Governors around here in Jackson. First an observation and then a question. I have to say when you are talking about reorienting the government Jeff, I get really scared because we just went through the office of Homeland Security and for those of us who tried to deal with that. I mean I want to be really careful that -- that we may want to refocus mission a little less or a little more precisely that be really careful about reorganizing the deck chairs on the Titanic. And so I would give a note of caution to that. I've got a really practical question to the panel, which is each of the states has assets they can bring to bear on these questions about the energy. And then each of the interest groups have preferred energy technologies and some people say no to nuclear, never coal, wind is inefficient. And so you end up with when I call policy by prejudice where the Governor is, we promote policy by opportunity. What's the opportunity from my state?

I'm curious on this question in a very specific way -- how would you structure incentives that are technology neutral but move towards the results because I think what we really want to figure out is how do we mobilize and there is an immense amount of money sitting on the sidelines and I want to invest in energy and clean energy I just need to know what the ground rules are, what the incentives are. And so what we really want to do is -- is how do you use government action to activate a private sector -- which is really where the creativity is back to Governor Rounds point -- that's where the creativity is and the question is where do we put our thumb on the scale in a way that is technology neutral, modifies the behavior of the economy so that not only is green, green for GE but that green becomes green across the spectrum. We're talking about trying to modify the behavior of some 300 million people and associated economic enterprises in America and then worldwide. And you're not going to do that by tinkering so I am curious about what's the technology neutral incentive package that then sort of unleashes the technology development and then allows the flow of capital. There is a ton of money sitting on the sidelines for projects and right now what the financial industry has is really an environmental hobby not an environmental investment strategy.

Jeff Sterba: Two things Dave, I guess first point was absolutely right. I don't -- you don't reorganize to create good policy. You've got to create good policy and that usually comes down to people. Its always about people right and I think that's it's my comment about no one knows how to reorganize DOE, what the hell is that -- it's what you got make it work. That's the real key point and I think that's an issue of top priority.

On the investment side, lot of times it's not what you do, it's what you don't do. The points been made by a number of us it just bears stressing again. We cannot create energy policy by selectivism. We have got to make it broad, we need the diversity of all of those resources. And so there are things that need to be done and they will be different for different fuel sources. But anytime someone says "this isn't any good they gotta get rid of it" well you got to ask why?

So for example, let's take -- one of the very good tools that I think the federal government has used has been production tax credits. Now they have been largely deployed with renewables. The problem is we do it at one or two years at a time, which is just the most idiotic policy, it is almost better not to do a damn thing because people are using that as a signal to invest a new supply

development. It's just, well, can I get it built by December this year. That's just nuts. Or you can take the PTC technology -- the concept and apply it to clean energy, that doesn't matter.

You know there has been a proposal about, instead of a renewable portfolio standard, a clean portfolio standard. What's there to distinguish between renewables and clean coal or appropriate nuclear? So I think there are tools that can be used that are very powerful and I think the production tax credit is one of the best ones. We finally got smart and got away from too much investment tax credit, which is, you know, great everybody spends money but they don't get anything. So that's a powerful tool that can be used that's really results or technology neutral.

Jeff Immelt: I, largely Dave, agree with what Jeff said. I think metrics count. We should try to put all of the technologies on a common base on a cost of electricity and reflect that -- you now, in other words, I would reflect the total cost including pollution. So coal has a cost, nuclear has a cost for disposals. So if you put everything on a common base and then create incentives, like Jeff said, that get sunsetted.

So it is, "hey guys, you've got 10 years to get wind down to \$0.08 a kilowatt hour, \$0.06 go after. We got eight years to get solar down to \$0.12 a kilowatt hour. If you can't get down to \$0.12, we can't put you on the grid." In another words, you got to get everything on a common basis and then understand that one of the things that you can do is get things down the learning curve, like coal gasification sequestration. And if you build the 10th unit it is going to be 30% less expensive than the first unit was. And so we can get things down the learning curve effectively and then look at the numbers, let the metrics tell the tale and what Jeff said is right on of having a one-year plan for wind is just a little bit silly but having a 10-year plan for these technologies, I think is what you really have to do and that's where we look at the investment. We acquired wind business in 2002 and we gave all of our analysis to the Board of Directors assuming no PTC, because we didn't want to have a technology that needed a subsidy in order to be a business. You know we wanted the business to be business.

Governor Huntsman: Governor Ritter.

Governor Ritter: Thanks. Also my thanks to the panel. In Colorado, we've made a real push around developing what we call a "new energy economy". So it's economic development around developing energy resources both in traditional ways and trying to foster the clean production but certainly around renewables as well. I think governor Huntsman announced this idea about us advocating a policy for the next administration is really a good idea. I want to just explore a couple of things.

Number one, I think I haven't heard anybody say that energy security for this country is not going to involve energy diversity, right, that there's no one answer and so that has to be a part of that. The second part of it, I think the people of this country right now feel like they're in a free fall where energy pricing is concerned, particularly because of the price of oil, price of gasoline and as we talk about economic security around this, I think that policy has to really include a way of thinking about economic development and also the ability for us as a country not to go through boom and bust cycles for energy pricing and that's across all sectors.

This issue about affordability, I think is a very difficult one because we as governors have to have a great deal of concern around affordability. But I don't think we get as much assistance from the private sector as we could use. And let me just talk about it in terms of coal and wind. I think, let's just assume coal is about \$0.06 kilowatt-hour in Colorado and that wind is about \$0.09. If you do carbon pricing on that and do \$10 a ton, I think you get \$0.09 on coal and so you increase by 50% the price per kilowatt hour that's delivered on coal with the right carbon tax in place, it becomes the same as wind and even though wind is not a baseload generator, it still is the same -- of the same price, but a 50% increase for people who've been relying upon \$0.06 coal.

We have to think about how we get to a place where that's affordable, because there are people who live on the margin, who cannot sustain to 50% increase in their energy cost, but there being some other serious opportunity costs. One of the ways to do that is around efficiency and in conservation, but we really need help from the private sector to do that and we have a, I think, a fairly enlightened utility in Colorado Xcel that's put in place in Boulder a smart grid where all of the people who live in the City of Boulder will have the ability to see what they're using, when they're using it, how it could be cheaper, those kinds of things. And that's an example, I think, of a private partnership where they're helping us.

But I think on affordability, we need the assistance of the private sector and it's not always your best interest, right? If profit motive still has to be in place for companies that exists, market pricing of coal is something that government can do, but needs the assistance from the private sector and I think, really thinking about how we get to a place where people for whom energy costs can be a burden, how we get to a place where they're consuming energy that's higher priced, but consuming it in a way that it doesn't make such a difficult impact or adds to the burden in a way that they lose other things. They can't pay their healthcare, they can't buy their food or whatever. We really need the assistance of the private sector to do that. Any thoughts on how to go about it?

Jeff Immelt: Just say, when we started, I subsidized all of our businesses to invest in solar and wind when we started this GE's Ecoimagination. So, I created a bank account and say, look, I want to hit the Kyoto number and so here is a way to incent everybody in the company to get to that number, and because it was diseconomic in 2004, we created a little game inside the company.

By 2008, its lower cost then the coal plants and the gas plants that basically it replaced -- in some ways builds, some of those takes care of itself over time and what I think is just a inflationary world that we live in. And so I think, so point number one; I think some of these technologies get lower cost and the inflation on some of the fuels is almost going to continue unabated. But number two, I think one of the things we can do is really be, try to be, leaders in conservation, energy efficiency and some of the other things that we ought to be doing to be more flexible in terms of how we run our factories and working with utilities. Well, I think have a primary role and do actually have a lot of great ideas on how to better to balance the capacity and things like that.

Jeff Sterba: Governor, a couple of the things. You hit it on the head. Customers pay bills not rates. And that's one of the things we've got to keep in mind. But it's creating a new definition for what -- for my sector -- what utilities do. Utilities have been structured and regulated as commodity producers. And we sell a product which is, in this instance, electricity. That's very different to me than the notion that makes a heck of a lot more sense. We provide the facilitation for customers to get what they want; heat, light, a motor to turn and if there is a way we can help a customer do that at lower cost, that's exactly what we ought to be doing. But regulators provide a profit motive to utilities, to provide what? Electricity! That's got to change. And so one of the great things that is going on -- but it's not there by any means yet -- is to change that regulatory arrangement such that a utility has the ability to make as much if not more money by keeping a consumer from doing something, or using something different that reduces their bill, from what it otherwise would be. Because if I, the best plant I can build, the cleanest, the cheapest is the one that I avoid. But we got to get the incentive system right. Second thing, just a minor point, in order to get from \$6 to \$9 it would be about a \$35 a ton price for the carbon.

Governor Ritter: So one follow-up. Can I ask one other question while I've the mic. Erik you said that food production has to double by 2025. The population -- world population are going to double, why did you assume food production increased twice?

Erik Peterson: Those data are drawn from the FAO in Rome, and the reason for that is we are seeing with the rapid increase in particular in the BRIC countries Brazil, Russia, India and China. More by a way of agricultural inputs, they are moving from grain to meats, etcetera, etcetera. Especially these countries with large populations. So that puts additional stress going forward above and beyond the demographic dynamics that I talked about.

Governor Huntsman: Premier Doer we're finally getting around to you.

Premier Doer: Thank you Governor Huntsman and consistent with your question about the moon shot and the vision of the moon shot, I think it also has to have short-term targets and results in building hope. Because I think there is a battle between those who are despairing now about climate change and energy prices and the hope that we hear today, even some of the presentations over the last couple of days were pretty challenging for all of us. I shouldn't use that word -- I'm a politician!

And I do think that when I say to the public, this our plan and first of all that they think I'm crazy, because in Canada they first of all think climate change, or global warming is not a bad idea in January and February. And then secondly, when I say that this is our plan for 2050, they say Doer you're going to be dead by then, why should we listen to you or even 2020. And I really like the five-point plan that Jeff proposed for 2020. They say well you're not going to be running for office. You know this is great you, you come out with these plans. You're going to release it and it's going to gather dust and you're going to be gone.

So I think the plan for the Western Governors and Premiers should include like the moon shot, achievable missions. This mission, this hope and vision was also built upon mission after mission, after mission and we should have not only long-term targets on renewable energy, I believe but short-term targets -- short-term targets on getting the results or the mix decisions

made because I think we talked about that in Albuquerque. We all agreed we needed a mix of energy sources to go ahead to meet the demand.

We should also have targets -- we've legislated Kyoto for ourselves. It's going to be hard to meet but I've got a target for 2010 as well legislatively to have that in place. I think we have to come to an agreement in North America on how we price carbon. There is the issue; carbon tax is being debated in Canada. The cap and trade is being debated in Canada, there is no resolution to that. There's people that disagree with that as well. But I think we have to come to a consensus in North America and I also think we have to have affordable options for consumers.

I think we have to look at a regulatory environment that incentivizes people to improve their homes and their businesses and make it affordable, so it comes off the utility bill over a period of time so they can make those investments. We've saved the equivalent of a dam in Manitoba -- 400 megawatts in our province -- for a million people in just a five year plan on energy conservation. We are -- going to water -- we are going to sell more GE energy conservation products with lowering the taxes and other financial incentives because we're wasting too much water. But I do think we need some short-term results that we can be accountable for so that we can show the public that the mission is being built by successful missions to get there. I think the public doesn't want to hear politicians talk about 2050 or 2020, they think we're just being insincere. So that would be my recommendation as part of the plan.

Governor Huntsman: Understandable, well-articulated goals, right on. Well, let me take this opportunity to thank our panelists, Jeff Sterba, Erik Peterson and my good friend Jeff Immelt. Thank you one and all for being here. This has been very, very enlightening and to be able to tap into such brainpower is just a remarkable thing for us, as Governors and Premiers, to be able to do. And thank you for keeping us on task. Focused on our work plan and our directives ahead.

And let me just kind of end this conference by applauding the great work of Governor Freudenthal. I told Dave right after my election that I would always be slow to declaring or positioning any troops along Utah-Wyoming border and his friendship in sense of diplomacy and collaboration has of course maintained the peace in the region. I want to thank them for that. But is also important to see the progress we've made over the last year and even beyond.

I mean, when you look at things like energy efficiency that this organization set out as a goal. Every one of our states is moving toward energy efficiency with individual goals. We have 20% by 2015, which is a very aggressive goal in our state. We know that every other state wouldn't be doing it if not for WGA and the high bar that has set. WGA is establishing the Western Renewable Energy Zone initiative to identify zones within the Western Interconnect and facility transition to meet our Western energy needs is a hugely significant deal.

With respect to transmission and transportation, WGA again is leading out with respect to identifying the needs and establishing the processes for transmission and transportation projects that are identifying and mitigating impacts and working with stakeholders who are involved in this undertaking. So I want to just for a moment just say thanks to one and all of my colleagues, the stakeholders, the supporters who are in the audience for bringing us to where we are today,

because it is quite extraordinary when we look back on an organization that I guess could just be a gabfest and just talk and have nice receptions in the evening hours.

We are getting things done and I think that says something great about this organization. Now for next year, I think the most important task ahead of us is to develop a comprehensive bipartisan policy framework on energy. We've talked informally about it, we're going to get it done. And we will return next year to see how well we do. But I think as we set goals for the next year this must be first and foremost -- the most important thing that we stay focused on as a group.

This is going to require a lot of good work among our staffs, among the WGA, it's going to take I think a full articulation of the principles on which we based this statement. Not everyone is going to agree 100% obviously but I think we as Western leaders need to be smart enough to come around the document that really does represent the interests that we all share at this part of the United States and Canada and we look forward to getting serious in drafting this document.

Second, the next year you will notice that we will attempt to infuse a global dimension into what we're doing. And to that end I want to thank our friends from China who are with us here today and have in the last couple of days a delegation led by Mr. Huang Ping, who is the Counsel General out of Chicago and Mr. Li Lianshen who is a Councilor out of the Chinese embassy along with their delegation participants. We thank them for being part of this as well. It is a reminder that if we really want to make progress of some of these issues with respect to energy and climate, that we need to infuse an international dimension into what it is we do and then into our work plan and I am very heartened by this delegation coming for China. It reminds me of a great Chinese aphorism that was spoken during the Hung dynasty sometime between 200 BC and 200 AD. It means simply "together we work, together we study, together we make progress". So we're going to come up together -- with perhaps our most important partner in the world China -- with a collaborative effort that we can work toward next year. So that will be another aspect to our program.

Third is water. Let us not forget how important water is. It is the lifeblood of all our states, our well being, our economic vitality, our quality of life. I think an appropriate goal that this group should set would be something around the development of a nationwide water strategy that we as a group can begin to vet with our fellow governors. We've heard, I think yesterday and the day before, how balkanized water policy is and how important it would be to somehow get a streamlined a longitudinal policy that really represented our nation's interest. We haven't done anything like this in a very, very long time and I think it's time that we kind of reflect for a little bit on water policy going forward. I think that should take a little bit of our work program going forward.

But finally our thanks to one and all. We represent the most important, the most dynamic region of the world in terms of population growth, in terms of economic vitality, in terms of our tomorrow. 150 years ago, people were trading furs in this part of the country, and here we are trading best practices and great ideas that are going to take us into the future. This is still where our tomorrow lies, here in the great West both in Canada and the United States. And it really is an honor and privilege to represent such a vibrant dynamic region.

So, that said, we'll see you next year in the greatest state in America, the great state of Utah for a wonderful gathering in Deer Valley, both Deer Valley and Park City. And if you happen to see that we throw in a mountain bike race among governors as the opening ceremony, you'll know we are where it came from. So, thank you all for being here. It's been a real honor to interact with you and safe travels to your next destinations.
