

EIA Energy Conference, April 6, 2010

Opening Plenary Session

Introduction of Phil Sharp, President, Resources for the Future

by EIA Administrator Richard Newell

Richard: Thank you, Mr. Secretary for your remarks. So, excellent. So, yes.

I'd now like to invite Phil Sharp and Steve Bolze up to the stage. Secretary Chu actually is staying with us, but in the audience, attesting to the remarks we're about to get which I think are going to be quite insightful.

Our next distinguished speaker is Dr. Phil Sharp, President of Resources for the Future. RFF is a non-profit and non-partisan organization that conducts independent research rooted primarily in economics and other social sciences on environmental energy, natural resource, and public health issues.

Dr. Sharp served 10 terms as member of the US House of Representatives from Indiana from 1975 to 1995. He took key leadership roles in the development of landmark energy legislation. He was a driving force behind the Energy Policy Act of 1992. He helped develop a critical part of the 1990 Clean Air Act amendments providing for a market-based emission allowance trading system. After leaving Congress, he served as Director of Harvard's Institute of Politics and was a lecturer in public policy there. He serves on a number of distinguished boards and committees and was recently appointed to the President's Blue Ribbon Commission on America's nuclear future.

As before, we invite you to jot down questions, and hold up your hand to have them collected. Please note that we'll hold these questions until after we've heard from our third and final speaker, Steve Bolze, and we'll have questions on both of those presentations afterward.

I should also say I've had the personal pleasure of working with Phil Sharp and so I know we will all benefit highly from seasoned and insightful remarks on energy and environmental policy. So, please join me in welcoming Dr. Phil Sharp.

Phil: Thank you very much, Richard. I'm delighted to be here. I appreciate and I'm honored to be invited. Frankly as a former member of Congress, I'm just happy to be invited anywhere. But it's particularly an honor to be on the platform with Secretary Chu, who at a critical moment in energy policy, brings to Washington and the Capitol Hill, in particular, the kind of scientific and technological background and brilliance that, frankly, we have not seen neither at the Department, at the top of the Department, nor frankly most other places in Washington, DC.

And as he just demonstrated that this is really an incredible contribution to policy making at a time when we have so much distress in Washington, DC. I'm delighted to be here with Richard Newell and Howard Gruenspecht, both of whom have previous experiences with Resources for the Future and are very talented in leading EIA. I was about to give the caveat of who RFF is. Just let me quickly tell you that we do not take, as an organization, a position, so many of my remarks are strictly my own, and please don't hold them against our scholars or I'll lose my job.

And in particular, I want to mention what we have underway. We do a lot of work on climate and energy at this point. And in particular, we have underway a major project that we hope to be unveiling before long here — we're doing it in conjunction with NEPI, the National Energy Policy Institute from Oklahoma, funded by the George Kaiser Foundation — designed to try to look at comparatively different policy options that we have and combinations of those options not only in terms of their cost but in terms of whether what they would do for oil security, oil reduction, what they will do for carbon dioxide, two of the major goals that the Secretary just articulated.

Today, obviously, this is a question of perspective on short-term stresses and long-term change. And indeed, it seems to me that title understates where we are in the

world today. Let me also, just quickly though, before I launch into that, give my perspective on, that perspective suggests you, that EIA has been performing an incredible function in our Government, and in our markets, and even at among energy *[inaudible]* around the world by its data collection and analysis for more than 30 years. And by the way, interest in having this Agency in the Federal Government has waxed and waned over that time, as witnessed in its budget and elsewhere earlier in this decade.

There was a lot of talk that maybe we really don't need this crowd around or at least to the degree that we do now. Nobody makes that claim now as you can appreciate. And the size energy program, about, probably is, as old as the EIA and has been added through waxing and waning interest, and has been very impressive in trying to train young men and women in this field, but also to develop serious energy policy analysis and Will Cole has for many, many years led that and led it through hard times when the rest of the world didn't much care.

Well, let me just fly the plane at about 50,000 feet. That's always the easiest thing to do because you can't hit a thing. I guess you can...most planes, they actually fly at 50,000 feet; somebody reminded me recently, I didn't even have that right. So, let me just suggest a couple of things about where we are historically. It's always difficult for us to ever know where our generation is or where we are. And yet every valedictorian's speech and every political campaign suggests that the moment is now; we are at a critical turning point in history, et cetera.

So, I do this with some trepidation, but it does seem to me that we are at a time of greater change and greater uncertainty than anything we have seen since the Great Depression. We see it in our economy and we see it in our politics. We saw it in the energy markets over the last five years with the radical rise first in natural gas price and quickly followed by the world oil prices. And we saw as a result or partially a result of that the major energy legislation of 2005 and 2007 which, by the way, was either led by

a total Republican control of the Federal establishment or a mix of Republican and Democratic. And it led to the greatest market interventions in our energy markets by the Government since the 1970s — whether it's mandates, tax incentives, demonstration projects, subsidies, what have you — this represented a very significant change in policy development.

We of course have seen a massive financial crisis in this country, which led to a massive infusion of public capital into the private banks, into the private sector with Federal ownership, things that we could not have imagined only a year before it happened. We, of course, have been or we're still in or coming out of, we hope, a severe recession that led to the resurrection of John Maynard Keynes and, indeed, to the largest stimulus package since the Great Depression which, by the way, had very unusual characteristics to it. One, the speed with which it was done. Two, not just the size, but it was loosely coordinated internationally around the World. And three, of course, as the Secretary pointed out, had a major component to try to advance green energy investments in this country.

Well, very clearly in this kind of times, analysis is critical for private decision makers and for public decision makers. Without it, we will be extremely foolish to fly blind. But it is nonetheless even with it extremely hard to predict where things go. We have been very well ill-equipped over the last 30 years to identify these changes in prices and energy; they're almost never been predicted. And certainly, the time table when they went up or when they went down, we've often been wrong about how quickly market penetration would happen or it would happen faster than what we thought of various technologies. And of course, the politics itself as to what will be acceptable in any given moment changes and predictions there have often been wrong.

Well, let me just suggest three major themes that are obvious to, probably, everybody in this audience, but which not only require analysis but which have the potential for totally reshaping our energy policy, I mean our energy markets over the

next decade. But also, they either support or they undercut policy developments that we have underway.

The first is world oil prices, the second is domestic gas supply, and the third is climate policy. All of which the Secretary outlined a number of initiatives that are underway here. Well, in the last 40 years on oil prices, anybody who has lived through it knows and anybody's read about it knows, we have witnessed five or six times when prices have radically risen and then fallen together. And each time it rises significantly, or it even falls significantly, it shakes the energy markets tremendously, and it shakes our politics as well.

In almost every case, those rises and falls were not anticipated or at least not predicted in any timely way. Not by industry, not by Government, not by academics. And in each case, they have powerful impacts on investors, powerful impacts on consumers, and powerful impacts on Government policy making. When the prices rush up, we see ourselves drive for greater efficiency at all kinds of ways in the use of oil and other energy supplies. We see a drive for alternative fuels to oil, and we also see Government enter the fray to try to do something about those hurtful prices for the economy and for the consumer and to stimulate all kinds of other private investment.

When the prices go down, we see the counter happen, and it's happened several times. Consumers lose interest in those more efficient cars. Investors decide to drop off, whether it's shale oil or whether it's biofuels. And we see the Government policies drop off the charts and willing to spend the money and willing to regulate and willing to incentivize actions in the private market. The power of price is enormous in our society, and we need to always take it in mind when we're making policy.

Now, where are we in the future? The Secretary, I think, has given probably what most people think is the ways wherein the National Petroleum Council study of about a year or two ago, it came to that conclusion that the greatest likelihood is that oil...world oil...prices will continue to go up, but we do not know how fast. They could certainly take

off again. We do not know. They could stay at a sustained level. We see them edging up right now or they could fall back. After all, only about three years ago, one of the major analytical groups on oil markets in this country was predicting that the real level of supply and demand would create a world market of about \$40 to \$50 a barrel, and now we're nearly \$90 of course.

Now, if you'll explain these extreme gyrations in oil prices have been an enormous problem for analysts, and an enormous problem for industry, and, by the way, an enormous problem in politics. Obviously supply and demand fundamentals are central, but these markets are — and the oil markets are such a scale and they lack transparency in so many pieces of those markets that the fact is, we're always making guesses and calculations about what's being used and what's being produced, and what is expected in just a few years out.

The second aspect of that price explanation, of course, is the geopolitical risk premium that we know will always be there...would rise and fall in the market place with events in Iran, Iraq, Nigeria, Venezuela, you-name-it kind of proposition. But now there's a third element of pricing that has emerged and been challenged and been controversial in recent years. And that, of course, is do the large commodity traders or speculators, or future traders, do they have some significant role in causing prices to be higher than normal kind of proposition?

By the way in the 70s, the villain was not in the traders, it was in the companies themselves and so it's always hard to know what is actually the truth. But I know the Department, some people in our shop, and others are trying to break out those factors of pricing. Well, let me turn quickly to that, and oil markets are going to have an impact on us. We just don't fully comprehend how, and we have to be ready to adjust as they engage in significant gyrations, assuming they will again.

Secondly, let me turn quickly to this new natural gas supply, which is a tremendous boom in any respects to the United States, the shale gas we are talking

about. Again, by and large unexpected, the Government had done wise investment to help see if we could finally break through in shale. But until the prices rose, until private small companies got out there and took the major risk, we frankly just didn't know whether this was going to become a market reality. And there's still questions about how big and how much it's going to contribute to our needs.

But the consequences again here are potentially significant in multiple ways throughout our energy markets. Obviously already, they're reshaping people's thinking and investments in the global LNG market. They may or they have the potential for delaying the Alaskan natural gas pipeline one more time. Proposition, by the way, it was going to be build. If you remember the 2005 legislative consideration of energy, this was a sure bet. Everybody was for it. It may even have impacted the rate of growth in the deep Gulf waters. We just don't know. And the real question, or one of the interesting questions, is will the US become a gas exporter not just a potential gas importer as we have been for a number of years?

Now, the impact in the electric utility industry is already having reshaping thinking and planning there. Should new plants be...now be gas? After people, by the way, had made major investments in the 90s and the turn of the century in natural gas plants in this country only to find the natural gas prices start to rise and throw off planning there. Will it delay, without, in the absence of Government policy and we do have some Government policy...so will it delay renewables and replace that? Will it delay nuclear? And in the absence of Government policy, it seems like it probably would. Will it actually displace old, inefficient coal plants and even old inefficient natural gas plants? Well, that's far less certain in the proposition.

It will also not only have impacts in natural gas production, impacts in electricity, it obviously has impacts in the end users of natural gas. So, we don't know whether this is going to further delay, although the purchase of greater efficiency furnaces in our homes and other places that were being driven by high natural gas prices only a few

years ago. Fortunately, the standards that are being update on appliances by the Department are going to help on this score. But clearly, it's going to change people's calculation of the end use of this. And of course, the Secretary already mentioned the question of transportation: is this going to just become a...will it move into the heavy-duty cycle of truck engines or will it get farther and compete with electrification? It's clearly going to have an impact on our thinking about policy and our recalculation of various policies as we go forward. The real...I think the one thing that seems apparent and that is positive about it, it should make our transition to a low-carbon future a cheaper route to go than what we had anticipated only a few years ago.

Well let me quickly change, turn to that third topic and just briefly speak to it. And in the questions, I'd be happy to answer, maybe in a more specific way kind of thing. And that's the challenge of the climate change policy in this country. Now, we all know this is global in nature. We know that it requires a...if we're serious about the goals that are being articulated, the transformation, the energy sector over three or four decades is huge, and we know that to get there requires sustained policy at least until the time that somehow we get fuels and efficiencies that are below what is the current market cost of this kind of thing.

Much is happening in this field. In fact, so much is happening that most of this can't even begin to keep up with what's happening in the market place, let alone in the policy arena, Federal, state, and the international. And it's being done across the board by private corporations, by investors, and by Government. And indeed by citizen action, which I think has gone far too unnoticed in them having a greater impact than it's realized. By that, I mean, try siting a coal plant in this country today and you will have a major challenge on your hands and have had for several years at the utility commission and other siting and permitting authorities. And indeed, that citizen action has unquestionably blocked the building of many power plants or at least cost in behalf to

negotiate to get the permits by either going to higher efficiencies in coal burning, or to agree to energy efficiency programs for their customers, or by closing old coal plants.

Well, what's missing of course is that we still don't have in place a carbon policy architecture that can give us a long-term signal that the Secretary was talking about. And many of us think the wiser way to go is with the carbon pricing regime. The fallback position, of course, is the current Clean Air Act, which many think, and I'm including myself, is not the efficient way or the effective way for us to proceed. But it may will become the way we do proceed if the Congress is not able to act. Failure for us to get this architecture in place, not only risks not meeting and dealing with the issue at hand, but it also means that there will be major uncertainty for several years to come that are going to impact on our energy markets. We would be expected over the next decade to invest private capital investment by and large, hundreds of billions of dollars in energy infrastructure in this country alone, trillions around the world.

And the fact is that that investment could well be slowed by failure and uncertainty in what the policy is. It certainly could be miss, meant...meaning that it has to be redone in two years or five years or seven years from now kind of proposition. So, it probably has a drag on an economy at a time that we don't need to drag. Now obviously, how you design a program becomes critical, but whether or not we leave this up in the air is also, in my view, critical.

The other thing that is going to happen, I think is very likely to happen, is we are going to see more carbon fights inside the Government and outside the Government. By that I mean when policy is raised or appropriations are in the House of Representatives, when regulatory activities are taken here or in any other agency in the Government, they are going to be increasing the people who are going to step in and say, wait a minute, that actually adds more carbon dioxide to the environment and we can't have it. There's going to be continuous fights. They won't all win, but they're going to be there and they're going to be as intense just as I mentioned on the coal plants a moment ago.

Without a carbon policy in place, it means we have little intellectual logic by which we can argue on these fights and these cases as to what are acceptable carbon dioxide molecules and which are the bad ones. Without a policy, it is easy for any intervener or anybody to take the position that it's all bad. It's just more. And therefore, we are going to need, in my view, to help settle some of these disputes, which I think will increase significantly in the next four years. Right now, advocates for change in this country — and there are millions of dollars behind this advocacy — who were trying to deal with what they believe is a scientific urgency of this problem have focused their attention on the legislative process. But failure in that process means those resources are going to go into carbon fights in every state and in every regulatory apparatus.

So, in short, it seems to me it is wise for us to get on with this important endeavor of trying to shape a good carbon architecture. Well, with that, let me just quickly say an analysis is going to be critically important. EIA is providing a very important service here, but we are facing some very tough questions that are going to take a lot of judgment, a lot of collective enterprise, and a lot of invention by individuals and companies for us to meet very uncertain times. Thank you very much.