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Session 8: "Energy and the Media"

Mr. Anderson: …subject of energy of the media, a rich subject if ever there was one. My name is John Anderson. I'm joined here by four people who are in the midst of that subject. From my left, Steve Mufson, who writes on this for the Washington Post, and incidentally was also a Beijing Bureau Chief of the Post for several years which turns out to have relevance to our subject. Eric Pooley, who had a long career at Time Incorporated. He was national political correspondent among other things, and managing editor of Time, and has recently been at the Kennedy School at Harvard. Robert Rapier, who resides over the R-SQUARED Energy blog which I and I suspect many of you pay attention to, and Barbara Hagenbaugh who covers economics and energy for USA Today. We are not going to run this with formal presentations. We're going to run it as a conversation, and at some point we will open it up for questions from the floor, and would like you to take part in it. I would like to start off by going around the table and asking about a piece of recent history clear in everybody's minds — four dollar gasoline last summer, $147 oil. That was a huge story for several months. In retrospect, how did we do? Did we get it roughly right? Did we have the causes and consequences roughly right? And in retrospect, what could we have done differently? Let me simply go around the table starting with you, Steve, if I may.

Mr. Mufson: Well, I think that we did so-so, but I think it's a very difficult to do. Actually, I also covered oil and gas for the Wall Street Journal in the

early 1980s. I spent a lot of time looking at oil numbers, and I've been through a couple of different price cycles. So I won't pretend to have expected $150 oil, and I won't pretend to have expected it to drop all the way back down to $30-something. But I think that the most we can try to do in the newspaper business is try to explain some of what's going on even if we can't predict exactly what's going to happen next. And I think that we highlighted a lot of those issues, and I think that it's hard for most people to understand because the marginal barrel of oil is so important in setting the price. If you don't have that barrel, it's not around, you are willing to pay a lot for it.

And when the economy starts to tail off, and suddenly there are a lot of extra barrels on the market that can have a very dramatic impact on the price. We've seen that over and over again. I think it's a little hard because there are a lot of things going on.

A lot of people ask me about peak oil, and I think obviously there's a peak out there somewhere. And we are by definition getting closer to it. But whether that's closer in ten years or closer in fifty years, it's really hard to say especially when technology is changing and making a lot of barrels that once seemed out of reach seem much closer. I think that one of the hardest things, if I had to say that the hardest thing about trying to figure out what was happening was to figure out the role of what's commonly known as speculation, but you know is basically investors trying to invest in a way that will enable them to take advantage of whatever price movements there are.

And on that, this isn't so much a question the type of data that EIA keeps, but I think what would be helpful, and I think should be done going forward, is that I think that positions in the oil market should be disclosed more

like positions in stocks. If you own more than a certain percentage of a company, you must disclose that holding to the SCC, and I think the same thing should be done of positions—maybe larger positions, but still positions in certain months of energy contracts. That way we would avoid the kind of thing where Amaranth is controlling forty percent or whatever it controlled of a certain gas contract. And you would have a better idea of what's driving the price on the futures market because the futures market is setting the oil price. And there does seem something a little backwards about that because there are, as most of you know, some special conditions and cushion that can drive price up or down, and then could have an impact much more broadly. So I think in that area of speculation is where we're having the most trouble.

My own feeling is that it doesn't — that traders can't make the price go up all by themselves. I think they can magnify a trend that's happening, and they can magnify it a lot. But, ultimately, you can't keep the price of oil above its fundamental supply and demand picture for a great length of time anymore than you can keep a tech stock up there, or the price of silver, or the price of a natural gas contract. You could magnify and accelerate trends, but ultimately the supply and demand picture has got to prevail in the long run.

Mr. Anderson: What would you add to that?

Mr. Pooley: I just have a couple of things. I agree with Steve about more transparency and more disclosure of whose holding positions. I was the editor of Fortune as gasoline prices were passing $3 a gallon - and a couple of interesting points there. We did some long explanatory pieces trying to explode the notion that it was all just speculation causing this. We also did some exploration of the elasticity of demand. At $3 people weren't yet driving less.

And I can remember some conversations with people at General Motors who thought at $3—3.50 no problems continuing to sell their SVU fleet into the foreseeable future. We saw how that turned out because at $4 - bam - we found out where demand tailed off quite dramatically changing the demand for that marginal barrel of oil that Steve was talking about and sending prices plummeting. It was humbling to be covering that stuff and very, very difficult.

Sometimes I feel like I'd like to have some sort of electronic bracelet so that anytime I'm tempted to make a prediction or to use a forecast I get a mild electric shock reminding that nobody knows nothing. We don't know where these prices are going to go next. And not only should we as journalists be very wary about making our own predictions — and one thing I've always tried to do is go back and look at earlier predictions for stocks, prices, whatever, and when we have egg on our face, own up to it. But beyond that, also have a mild electric shock when we're using somebody else's forecast because forecasts are imperfect and we can talk about this a little more later, but in the energy field there are authoritative sources like EIA — and they are the first to admit the level of uncertainty involved in making predictions.

And then there are a whole range of sources with various axes to grind. And I think that reporters need to do a better job of understanding for themselves why some of these numbers may be too rosy in whatever way whether it's industry, whether it's other interest groups, and also to disclose to the readers why those forecasts and those predictions are carrying various kinds of water. So I think those are important points maybe we can touch on in a bit.

Mr. Rapier: I've got a stack counter on my blog, and it tells me what

brought people in there and where they came from. Why are oil and gas prices rising are probably the number one keyword search that brings people in there. Sometimes ironically from the media, they want to know why oil and gas prices are rising. I'm an inventory watcher, and I use the EIA data religiously every week they put out the statistics. On Wednesday I go in and I look to see what oil inventories are doing, what gasoline inventories are doing because we have a pretty good idea. I used to be the guy in the refinery who would send those inventories in every week. We've got a pretty good idea of what the gasoline inventory situation is.

So in 2007 we had, I think it was ten or eleven weeks in a row, that gasoline inventories fell, and they fell well below the average range just as we were going into summer driving season. And I got in a little bit of a friendly banter back and forth with Doug McIntyre who wrote *This Week in Petroleum* at that time, he works for the EIA, and I said I think we're heading for record gas prices by Memorial Day. He said that generally prices pull off before then and level off. And I said, "Yes, but look at the trend here. The gasoline inventory trend was like this." I said, "Something has got to give here because demand is just about to pick up." And sure enough, that's when we hit $3.00 gasoline by Memorial Day.

In the world oil markets it's a little bit more murky because we don't have as good of inventory data. Again, we do in the U.S. We've got pretty good data in the U.S., but gasoline — you want to know what gasoline prices are going to do, pay attention to inventories, and the time of year. I mean, gasoline inventories are low in the fall; it's not such a big deal. Gasoline inventories low going into summer driving season, that's something you better watch out for.

Hurricane season. Going into hurricane season you better have good inventories. And we didn't last year, and that's again — when the hurricanes started to come in, I warned people we're going to see some gasoline shortages. And we did because the refineries went down. We didn't have enough inventories on hand, and suddenly spot shortages.

Ms. Hagenbaugh: I'd say we did a good job last year covering the gasoline story ad nauseum. I mean, every day practically I was charged with doing another story about what was going on with gasoline prices. So trying to come up with an original angle got a little difficult over time. I would agree with what Steve said. It was hard to - you know - you'd get all these angry phone calls from people who were saying speculators are doing this to us. You've got to do something about this. And it was really hard to get to the bottom of how much was — we had a big debate. Is speculation illegal? No. So at what point do you say this is part of it. Is this some evil thing that we should be covering, or is it something that's just a natural part of the markets?

So I think that was a big challenge to try to get beyond just the basic supply and demand fundamentals which were obviously a big part of it. I don't see it as my job to predict what the prices are going. I have to rely on people who that's their area of expertise, and I think it's important to have a [unintelligible] to know do these people have any skin in the game. And that got difficult with Goldman Sachs who kept coming out predicting. It turns out they were right that oil was going to get to $150, but you had to keep in mind that Goldman had—has his training. And so you had to bring that out and it was impossible to know how big their position was, and was it in their best interest for every newspaper to be coming out with their predictions saying that oil was

going to hit $150? So you have to try to keep that in the back of your minds. That is a complicated part of it.

I think overall the media did do pretty well. I think there was a lot of talk that we were scaring people and it turned out to be pretty accurate, the warnings about like how high the gasoline prices were going to go. So overall I think we did a pretty good job, but I think there is still kind of some analysis to be done as to what did happen last year as well.

Mr. Mufson: I think for us we tried to hit on some of these questions. We did a story just about Goldman Sachs looking at it being on basically three sides. It's analyzing equities. It's trading on its own account—actually four sides. It's trading for customers, and it was also issuing commodities prediction prices. So we did a piece just looking at them and had some people trying to take some of that out of them. We also polled about how people would react to high prices. I think a lot of the oil companies thought that $3 was the magic number. But, in fact, you can poll for this stuff, and we did. And we found that $4 — around $4.20 or so was the magic number in which most Americans would start to alter their driving habits and car purchasing habits. And that turned out to be fairly accurate. So I think we can contribute — even if we're not forecasting, some understanding of what's happening.

And also, we were trying to look closely at China. The statistics are much harder to read for China for a variety of reasons, but there are a couple of particularly good analysts who have been tracking that. We've been trying to put some mention on that in every story because China was really the big driver of demand growth for most of this decade, although the United States was about the same, much smaller in percentage terms. But in absolute barrels, the

United States and China were about equal for the first several years in the decade. So now they've both pretty much tanked in the last year — last nine months.

Mr. Anderson: Eric, I'm going to ask you to come back to the point that we talked about in conversation. You suggested that it might be useful for the EIA to run workshops on these numbers, what they show and what they don't show for working reporters. These are complicated numbers. Sometimes it could be more complicated than they look at first glance.

Mr. Pooley: The thought here is that, alas, not every reporter out there is as well versed in this stuff as Steve and Barbara are, and that some of them get thrown into these beats and they don't understand what underlies an EIA or anyone else's forecast. I began thinking about this really from work I was doing on climate change and on modeling in forecast for the impact of carbon price on electricity prices. And when you begin to look at those models you really have to get down into the weeds and see what are the assumptions about uptake of alternative energy, about future petroleum prices, about the mechanics of the cap and trade scheme that they're modeling to figure out who's really trying to do a good job on this and who's trying to create a piece of political — what I call a weapon really, of public persuasion because a lot of the combatants in this on all sides of the debate have it in their interest to either say that cap and trade is going to be so expensive it will drive up electricity rates so high that it kills the economy.

Or, on the other side, that it will create millions of green jobs and everything will be rosy. So if you receive one of these reports and you're a working reporter, oftentimes you don't have time to really look at them. And

even if you do look at them you may not have the facility to know what to look for in the fine print. So that got me to thinking, who are the experts around town that could really bring reporters up to speed?

Now people like Steve and Barbara can do it one-on-one with younger reporters in their shops, but the news organizations are smaller all the time. And it just struck me that a group like EIA could do a great deal of good in explaining what underlies a forecast, what underlies an economic model, and what are the red flags that a reporter can look for to know if someone is playing fast and loose with the facts.

Mr. Anderson: I hope the EIA is listening. There may be someone from the EIA here for all I know. Robert, you have dealt recently in your blog with the interesting question are we running out of oil? This is one that all reporters constantly have to deal with. How do you deal with that?

Mr. Rapier: It's obviously a very controversial subject. And often I see very frequently media stories dealing with peak oil as we're actually not running out of oil. We've still got a trillion barrels in the ground. So the issue is not running out of oil. We will never be running out of oil. We will have oil for one hundred more years. It's can we get it out of the ground fast enough to keep up with demand growth? And that's where the problem is going to lie in my opinion and forward.

We may see an oil production peak in the next three to five years. There are a lot of very authoritative people who believe that that's the case. There are some people that would believe that renewables are going to come in and fill that void. I'm not one of those people. I believe it will — there will be a contribution, but if we have a world oil production peak in the next three to five

years we've got a serious problem. But, again, it's not about running out of oil. And that's the most common misconception I see about peak oil when people write about peak oil. They want to debunk that by showing how much oil is left in the ground, and that's what we're talking about, one trillion barrels of shale in Utah. The trillion barrels doesn't help when it takes more than one trillion barrels worth of energy to get it out. So it's useless. And that's about the case. It takes a tremendous amount of energy to get that oil out. So we don't have a trillion barrels of recoverable reserves, maybe a very small fraction of that because the energy balance on that is very marginal.

Mr. Anderson: Barbara, how does a reporter working from day to day deal with the problem of editors and readers who want sharp clear answers to questions like this that are very much in controversy and very often as Robert suggests aren't even quite the right questions?

Ms. Hagenbaugh: It's complicated, and you know, USA Today a lot of times, I've got this much space to do all that. So I mean, the most important thing is like Robert just said, there's two sides to this story and this is always to try to bring that out. I sometimes — editors get frustrated with me because I don't come out and say this is how it is and this is what the answer is. And I kind of think it's important to show all the nuances that you can. And the frustrating thing I think for people on that is you're not giving the people this is what the answer is, and I think that's what a lot of times people want. But I think in energy it's an issue that there isn't — there are no clear answers a lot of times. There are a lot of shades of grey, and I think it's important — but it's also important to know who you are talking to. So some of these people who are introducing these shades of grey, are they legitimate or are they people who

once again have an interest in this? So you always have to keep in mind who you are talking to and what their background is.

Mr. Anderson: That brings us to the question of false balance. How you deal with that in stories? The reporter knows that of his sources, 99 think yes, and 1 thinks no, how much weight do you give to no? How do you deal with that, Steve, on a day-to-day basis?

Mr. Mufson: Well, if it's 99-1 usually you pretty much disregard the one I think. We're not doing scientific surveys of experts so that's where your judgment is supposed to come in. I would say the only thing about quoting people who you think might actually be completely wrong. The only time I think you might want to do that is if you think they are actually having some impact on the debate here, and that there factor then needs to at least be noted.

Mr. Anderson: It makes a difference whether you're covering a scientific meeting or a Congressional hearing.

Mr. Mufson: Right. So Eric and I actually had a back-and-forth of an example of this recently. In the current cap and trade debate, if someone quotes a number that seems completely ridiculous on the cost impact do you ignore that or do you pay attention to that? Well, so if it's some person who's cooking up a number in some university in some remote place and it's not really part of the dialogue here then maybe you ignore it. If it's someone who's the Republican minority leader is saying it or the US Chamber of Commerce is saying it then maybe sooner or later you need to deal with it in some way. So I think that would be an example.

In oil, I think you have a little bit more leeway because Congress isn't necessarily debating some issue on setting oil prices or that's going to have a

direct impact on oil. I'm trying to think of an oil analogy to that carbon tax thing, but nothing kind of springs to mind right away.

Ms. Hagenbaugh: It's interesting, though, the 99-1 issue because in the economics, if you look back a year and a half ago how many economists were predicting we were going to be in a recession it might have been just one. And the one person I'm thinking of was predicting it for different reasons than how it actually happened. So the challenge there is when looking back on it, I wish maybe I had followed a little bit more of what some of these people predicted.

Mr. Mufson: Right, Nouriel Roubini is the one that maybe you should have listened to a couple of years ago.

Ms. Hagenbaugh: But he predicted it because of a trade — he thought it was a trade imbalance problem, not what happened.

Mr. Mufson: There's some judgment involved. It's not a scientific thing.

Mr. Pooley: It's tough. I mean, the reporters tend to be trained to look for conflict, and conflict is fun to write about. I think in a lot of these debates it's important, and Andy Revkin of the Times has said this about the climate, to look for points of agreement and figure out if there is an emerging consensus somewhere. Now that doesn't mean they're right. The majority isn't always right, and things — by Roubini or some other genius can turn stuff on its head and show that the herd was wrong. The influential outlier that Steve mentions is a very interesting point. I don't think that you ignore an influential outlier. I just think you fact check him or her. And if someone is loud in a debate with numbers that you have reason to believe are phony, I think you need to share that reasoning with your readers.

So it is complicated, and it's tricky, and all this stuff is being done on the

fly by daily newspaper reporters which makes it harder. I came out of a magazine tradition where at a weekly like Time, or a bi-monthly like Fortune, we had a little bit more time anyway to think about this stuff which is frankly a luxury that reporters these days even in magazines don't have anymore because they're blogging on a daily basis. They are filing to the website, and they're writing their magazine pieces. So the pace of everything is so much faster. And frankly, I think the combatants in some of these policy wars bank on that. They really just want the headline. One of the headlines that came out of the National Association on Manufacturers Report said that if cap and trade passed, gasoline would go to $8 a gallon. So the Dallas Morning News went with that headline, $8 a gallon. So that's a win for the opponents of that bill. And if the reporters or the editors of that paper had then later thought better of it, fact checked it, maybe did a follow up, as far as the combatants in the policy were concerned, so what? They got their scary headline and that's what they were after.

Mr. Mufson: I actually generally tell people we don't write about reports. I'm not doing news stories about reports. I'll do a story about an issue, and then you can talk about what different people are saying about the issue, but this is why I generally don't write stories about reports. There are zillions of them around. I'd rather just take on the whole issue and be able to talk about what a lot of different people are saying.

Mr. Rapier: I put the question to my readers on my blog and also at the Aldrum (sp?) where I write—I said, "Energy in the media, what do we need to talk about?" False balance, probably the most popular answer. People want to hear about false balance. One reader gave the example: "scientists discover

that the earth is round: flat earth society disagrees." The problem is it's not always clear who the flat earth society is especially in the new biofuels technologies. Algae into biodiesel, is that flat earth thinking that we're going to be doing that on a grand scale within five years? I can't even tell for sure early on. I have to really dig and dig. Steve interviewed me about three or four years ago. It was very early on whenever I was writing about ethanol. He interviewed me for about an hour and one tiny snippet showed up in that story. And I thought, boy, that was a lot of work, but I understand why he did it now. Steve is one of the best writers out there on energy. He does his homework. Really a lot of discussion to determine, is what I'm seeing credible in my complete nut, and that's what you have to do. And not everybody does that. And so you get some of this false balance reporting. It's important for the reporters to really do research. And the good ones do, and the good ones don't do that false balance approach.

Ms. Hagenbaugh: Which I think is important to people who are our sources to understand that a lot of times I call and talk to people for an hour, and sometimes they don't even end up in the story. But a lot of it is I'm trying to get it right. And so I'm trying to understand the issue and understand what's happening. And so a lot of times it is me bouncing ideas off of people, and this is normal. But I do sometimes get phone calls from people — "I talked to you for an hour. Where am I?" So you kind of have to throw up your hands and—

Mr. Rapier: I've learned that's the norm. Generally, I talk to somebody for an hour. The people who write an say, "Can I get a quote," those are the ones oftentimes it's really a skewed story. They want the quote to say this guy is crazy. Look what he said. But when they really go in depth, they are

probably writing a pretty good story.

Mr. Pooley: The habit of mine that responds to the enthusiasm of the marketplace with a little healthy skepticism is a very valuable thing. I can remember when I was editing Fortune getting a call from a venture capitalist who was turning into one of the prophets of ethanol — this was 2206, maybe late 2005. He said, “You guys have to do a cover on ethanol. It’s going to transform everything, and I want to write it this guy said.”

But I said, “It’s interesting. We’re interested in it, but you’re not going to write the thing.” But we did a big story pretty early about the promise of ethanol, but frankly it might have been a little booster-ish . And then a piece came in over the transom from a guy named Lester Brown who was the first person — and many of you know who he is - he’s the author of a book called Plan 2.0, and has been a real leading thinker on alternative energy and sustainability. Well, he was the first guy that blew the whistle on the competition in the food chain for ethanol. And when he blew the whistle on that I did invite him to write an opinion piece for Fortune about that, well in advance of legislation passing, warning that this was going to lead to disaster. So, in a stroke, we were probably responsible for both hoping to fuel the enthusiasm and one of the lowly voices in the wilderness that maybe this wasn’t going to turn out so well.

So, you try to both cover what’s happening in a skeptical way and there are times, frankly, when I wish we would have been more skeptical. And you also try to give legitimate warning voices a platform. But in that case, the warnings were completely drowned out by the agribusiness lobby that just grabbed that and turned it into something different than its early proponents had

intended.

Mr. Rapier: You have a second chance to be skeptical now. Say a little ethanol, biodiesel into algae; those are things that you should look into a little bit, display a little skepticism. Some people are starting to do that.

Mr. Anderson: Robert speaks with some authority. He's the one person on the panel, and one of the few people writing on this subject who has a technical background. He's a chemical engineer, unlike most reporters. Steve, did you want to add anything to that?

Mr. Rapier: That means I can get away without wearing a tie, though, and people forgive me for that.

Mr. Anderson: What about ethanol? How should a reporter approach the future of ethanol? What are the questions he should ask?

Mr. Rapier: Energy in and energy out is very important, but it's not the only important thing. And I give an example. Some people say that if it takes more than a BTU of a fuel to make a BTU of ethanol that's a no go. It's not really because coal, for instance, is quite cheap. So if you took two BTUs of coal to make a BTU of liquid fuel ethanol, from an economic standpoint maybe that's doable. So the energy in and energy out is not the complete story. Unintended consequences — I don't think we spend enough time thinking about what can happen here. What are the things that can happen? Cellulosic ethanol -we turn all this biomass into cellulosic ethanol. What are the implications?

There was a story a while back. Michigan, they figured out they might not have enough trees to fuel this cellulosic ethanol plant because cellulosic s— biomass in general has a very low energy density. And that's what I call the

logistical problems of cellulosic ethanol. You have to go out farther and farther to fuel this plant. Do the calculations of like a mid-size cellulosic ethanol plant is going to consume the equivalent of about one million mature trees a year. So think about a 20-year lifetime, 20 million trees, that's a lot of biomass. And as you get out to the edges of that it's —you're burning up all your energy getting it back into the plant.

So, those are the kind of things I would question. Your logistics. How are you going to logistically pull this off? How many trucks in and out of days is that? And how in the future are you going to fuel this? A lot of the biofuel options we have are really recycled fossil fuel because they're entirely dependent on fossil fuel. If fossil fuel prices go up —they have to go up because that's what they are. They're fossil fuel. And we really need to go to something — and I talk about the Brazilian ethanol example.

I'm a fan of Brazilian ethanol. I was in India last year, and they do the same thing. And I went through a plant. They end up with a waste material at the plant that they have to dispose of bagasse It's free fuel. Now we don't have something — in Louisiana and Florida they could potentially do something like that, but the economics of selling molasses and sugar are better than turning it into ethanol, but they do the same thing. They've got all the bagasse, and they use it to fuel their plant. A model like that will work. And people sometimes say — and this is some false balance. We discussed it earlier just a little bit. Dan Rather, Frank Sesno out there saying, "I was in Brazil. I saw what they did. We can do the same thing." The problem is we've got a higher population than Brazil. We use six times the per capita energy of Brazil. It's completely apples and oranges.

So, no way can we emulate Brazil, but I see person after person saying Brazil the ethanol miracle in Brazil was done because the government set the mandates and they set the standards. What they don't tell you is that the ethanol miracle really is about 90-percent oil. Ninety percent of their energy comes from oil, and Brazil makes a lot of oil per capita, and they've got a lot of oil reserves. That's how the ethanol miracle in Brazil happened.

Mr. Mufson: Well, ethanol is kind of a grey, political, technological, and economic story. And we've been trying to cover different aspects of it. As most of you know, the real issue in the energy business for most alternatives is scale. I think most people just don't have any appreciation just how huge the energy infrastructure is, and just how gargantuan our energy appetite is. So. if you were just trying to supply the country with corn-based ethanol, even if you didn't have a food competition problem, you'd have a land issue even with rising yields if you want to keep on going beyond much beyond the kind of five/ten percent level that might make sense. Might.

And so we've written a little bit about the encroachment onto conservation labs that were an important part of our country's kind of agriculture and interior policy. You're going to run into conflicts with your carbon policy because some of those lands where, if you start tilling those lands you're going to lose carbon that's being stored in the soil right now. It's a good economic story because we're still subsidizing all this stuff tremendously. So, we did a story about just on -never mind all the other stuff - but just the straight per gallon subsidy would add up to a couple hundred billion dollars over the next ten years.

So, what could you do with a couple hundred billion dollars? Maybe you

could do something that would make more sense. We have the tariff that's keeping out imports that might not only be cheaper, but be more sensible from an energy balance point of view because maybe they'd be coming from sugarcane as opposed to corn which is about the worst thing you can make ethanol from. So — and the cellulosic which about every other venture capitalist has pitched me on. If it were so great and so easy, why isn't it happening yet? I mean, obviously coming up with enzymes in a process that's going to make it not only attractive from an energy point of view, but also from an economic point of view isn't quite there. It doesn't seem to be quite there. I've had a couple of companies tell me that they do think they're there. But, I'll wait and see.

And then it's, of course, a very important political story. President Obama endorsed during the campaign going up to 60 billion gallons a year for ethanol, which is about 5 or 6 times our current level, and that's probably why he won Iowa, and that's probably why he's President. So there are a lot of dimensions in this story we're trying to cover at the same time.

Mr. Pooley: I think that scale issue that Steve just as so important, and tip of the hat, he did a really nice story a few days ago about the scale of Obama's aim for energy independence and siting and I think it was an EIA statistic, saying that even under EIA's most aggressive uptake of alternative fuels in 2030 we'd still - or alternative energy sources by 2030 - we'd still be relying on 79 percent fossil fuels. And so that's their best case. Now if you think about the 500 to 600 coal-fired power plants around the country what it would take to actually capture and store the carbon dioxide from maybe even a third of that fleet -best case - is a staggering feat. Everywhere you look, as you

think about sustainability and how we're going to avoid sort of crashing on the shoals of our fossil fuel dependence, how we're going to get out from under that thing. Each one of these things is an extraordinary — each of what I guess the Princeton professor Robert Socolow calls a sustainability wedge. Each one of those wedges is a monster task. And if the climate scientists are right, we have to solve each one of those to have a shot at avoiding a climate catastrophe and finding sources of fuel that are sustainable throughout the century into the next.

So, the magnitude of this task is something that I think is very difficult for anybody to really get, let alone explain to readers. So I think that whenever I see a piece that does a good job as Steve does, I tend to press it into people's hands. So that's a really important part of this story that gets overlooked sometimes when we go into the weeds on any one part of it.

Mr. Anderson: Barbara, Eric just mentioned the slogan energy independence, and that brings up the question of how in daily coverage you deal with misleading slogans? For 40 years this has lived on in American politics. It always turns out that the person, who is using it, if pressed, will concede that he doesn't actually mean energy independence, and there's a chorus of economists saying that it's impossible and even if it weren't impossible, it would be undesirable. What do you do when energy independence turns up in speeches and reports and testimony?

Ms. Hagenbaugh: That's a good question. You try not to use it is part of it because it is a catchy phrase that, you're right, every economist will tell you, we never want to be energy independent. That's kind of a ridiculous concept — comparative advantages. So as a reporter, you should be trying to explain but…. The problem that you bring up is daily situation. Once again, I

have this much space, and how do you explain to people, well, he — Obama was arguing for energy independence, but actually it really is not really possible to have energy independence. So, what is nice to be able to do on that sort of situation is to do the step back story. Is it possible?

We did a similar thing when the stimulus package will create x number of jobs. You can repeat that over and over again. The Obama Administration predicts it will create or save x number of jobs, but you try and do a step back piece and say actually if you talk — it's hard to find an economist who will actually agree that that is really what's going to happen. So, I think the problem with it is that in the newspaper business in this day and age, it's harder and harder. I don't know if Steve finds this — it's harder and harder to find the time to do those kind of pieces because we're just limited resources trying to chase what's happening as it's happening, too. So it's a challenge. It's a huge challenge.

Mr. Mufson: Time is definitely a factor. I'm probably writing more stories for the paper now than I have in all but one of the thirty years I've been in journalism, and that was in the year of 9/11 when I was covering State Department. And then there's all the web based stuff, too. But the job figures is a good example because who the hell knows how many jobs are going to be created out of this program? I mean, it's a shot in the dark. And you'll never know how many versus how many were lost.

I have one example where I did have time to make the call. This is the kind of thing we should be doing all the time, is DOE announced a loan guarantee for a solar plant or company in California, Solyndra. And the press release said this project would create 1,000 jobs. So I called Solyndra and I

said, “So, how many people are going to be working at this plant?” They said, “Five hundred people.” So, the one thousand number, maybe you get to it if you include all the tangential things that might flow from that plant, including the people installing the panels and what nots. We didn’t make a big thing of it by saying DOE is exaggerating, but I used the accurate number. And that’s what we need to try to do all the time. And the stuff is coming at you all the time, and try to catch as much of it as you can.

Mr. Anderson: Let me ask the three of you who are print journalists a question that mightily interests me and that is what affect the internet and the blogs are having on daily journalism. One of the things that strikes me is how fast the internet has developed. When I left the *Post* in 1996, there was one computer in the news room that was linked to the internet, and it was there as a curiosity. In 13 years, an enormous technical apparatus has developed, and with it a lot of people who are using it in ways that we never would have expected, and one result I gather is that you get much faster feedback and much more feedback than you used to. But also, you have reporting possibilities that you didn’t have 13 years ago. Let me ask that question of you, Steve.

Mr. Mufson: Yes, well, just to sound like a total dinosaur, when I went to work for the *Wall Street Journal* we used a manual typewriters, pneumatic tubes triplicate, the whole works. I was then posted to Africa where I used the last living reporter to use telex machines. They are really a pain. So internet obviously has changed everything. And it’s still hard to say, still too early to say exactly how it will all end. But I think that obviously it creates some opportunities for us because we have immediacy.

We have a huge readership that we didn't have before. But I think that's kind of more related to this discussion, and more fundamental issue, which is that if you go out to use the web, you as a reader have much more access to material than you did before. You can go out to the EIA web site and you can have access to a lot of the figures that might have been very time consuming to find before. The question is what is our role as this goes forward? We're struggling with that.

But I think that part of it is connected to a lot of other things we've been talking about which is to what extent do we exercise in judgment in trying to prioritize what's out there? To me, ultimately, although perhaps not yet, ultimately the web is going to be sort of like the world before the web. There are lots of conversations. There's lots of information out there, and maybe you don't have time to do it all. You in this room are probably more energy experts than the average person, but the average person who might be doing a job unrelated to energy but still wants to be an informed person about energy issues, I hope will still turn to the newspaper as an intermediary that's going to prioritize things.

You know, you could have gone to the Congressional testimony before. Well, now you can get it on the web. But ultimately, I still think there's so much out there that there will be some sort of demand for an intermediary that can prioritize, tell you when something is important. And the question of course is whether there are advertisers out there who are going to support that kind of business model? But, ideally, that's where we'll end up, but it's challenging at the moment.

Mr. Anderson: Barbara, do you have anything to add?

Ms. Hagenbaugh: I echo. It is a big challenge right now. And I was in a hearing recently, and I was sitting next to a reporter who was Twittering during Bernanke says dah, dah, dah. I kept looking over his shoulder thinking that that might be my future. And that kind of concerns me a little bit because if people are doing things that instantaneous, how much are you able to stop and think about what you're doing? And so how much a reporter is going to be put in this position that you're not even going to have time to think to the end of the sentence?

I work for a wire, and we had to go and run and get the phones. So we weren't doing it instantaneous. So I think that's actually a bit of a concern of mine going forward that you're not going to have the same thought go into it. But, we're in such a period of change. It's really amazing, I think. No one is quite sure what's going to happen and how we're going to do it.

Mr. Mufson: See, someone described to me the other day a conversation they had had with an internet exec who was saying what are you actually bringing to the party if we were to do some kind of business together that I can't do with an algorithm? And I'd still like to think that there's something a newspaper does that a search algorithm can't do. Part of it is to judge what's out there, but part of it is also to find out stuff that isn't already on some data base and to help uncover things, interpret things, prioritize things.

Mr. Pooley: The business challenge that the internet represents to print journalism is subject of a whole other conference so I'm not going to go there. I'll just talk about the blogosphere for a minute and how important that's been to informing the thinking of reporters. Once upon a time one had to call up Robert and pick his brain for an hour. Now you can go to Robert's blog and see what

he thinks about stuff, and maybe then call him and have a shorter, more specific, more informed conversation because you've already had the benefit of all the wisdom on his web site.

So there's an extraordinary amount of richness out there for a reporter. There are experts in every field maintaining wonderful blogs, and there's just as much garbage and misinformation out there, too. So you have to navigate very carefully. But the good stuff is there, and if you're smart enough or lucky enough to find it, it can be extraordinarily helpful.

It can also keep you honest because it's a two-way business now where it used to be sort of a more one-way transmission. Maybe you would get a letter a week after your story appeared. Maybe you would get an angry phone call, but the amount of response was nothing then like it is now. And the ability of people who really know their stuff to keep you honest is extraordinary and can be humbling. And I think that's really all to the good. I think it's made journalists more aware of their audience, more respectful of experts, and more careful about what they're doing in the context of doing everything more quickly. I think the web has been a boom to journalism in that sense as long as it doesn't kill it.

Mr. Anderson: Robert, do you have any thoughts on it?

Mr. Ranier: It's like Eric said, there's a lot of garbage out there. And the thing is you can find an argument for any position you wish to make. I can support the flat earth position by things I find on the internet. I can go edit Wikipedia and then use that to support the point that I'm trying to make. So you really have to be careful and you have to know what's credible, what's not credible. It's like drinking from a fire hose. There's just so much information.

When I'm researching a story, I can take either side and I can support it.

Mr. Anderson: We've arrived at the point at which we will open the conversation to people in the audience. If anyone has questions, there are a couple of microphones. They are on this side of the room. And if you would identify yourself, and pepper us with questions, we'll see whether we can answer them. Go to it.

Mr. Johnson: Hi, I'm Brad Johnson. I'm with the Center for American Progress, and I'm a climate and energy blogger with a scientific background. So I'm kind of your competition in a certain way. So I have many, many questions, but I'll try to kind of put say George Will aside and the *Washington Post's* role in spreading his lies, and I would just ask a question which is one of the things that I see and in particular kind of raised from the EIA question, the question of how we deal with energy information and data, is a lot of projection, like for example, the Exxon Mobil, they talk about projections into the future for 80 percent fossil fuel use, energy mix in say 2030 or 2040, and you see similar projections. And stories about that generally or often don't ask the question what does that have to do with — what does the climate side of that look like on those scenarios? An 80 percent fuel mix and fossil fuel use in 2030 or 2040 from a climate perspective is catastrophic. And so I'm wondering is that something that should be in those stories? Is it a problem that they're not in the stories?

Mr. Mufson: Well, let's take the issue that you're not dealing with first. The editorial page, just for the record, is a separately run part of the newspaper from the news page, and the news reporters have nothing to do with George Will's column. Although it is safe to say that the column has been the subject of

some conversation.

Mr. Johnson: I do want to thank the *Post* for criticizing Will yesterday.

Mr. Mufson: But that's not actually what we're talking about. So, the Exxon study and all studies like that generally we aren't covering because it doesn't seem surprising to me that Exxon expects us to be using 80 percent fossil fuels. I did quote the EIA saying that because EIA presumably doesn't have the same stake in it as Exxon does. And so, therefore, when I mentioned it in passing in a piece over the weekend, I quoted EIA, not the Exxon study. So the question of do we cast doubt on it every time we write about it? Well, we don't write about it that much in that that context. But, yes, I think your fundamental premise point is a good one which is we are heading - if climatologist's forecasts are correct, we are headed for a climate disaster given policies and our habits now. And we're trying to write about that from time to time in different ways. But, I don't really have an answer for you in the sense that I'm defending something. I mean I think you're right. It is an important point, and we're trying to make it as often as possible.

Mr. Wallace: Richard Wallace. I'm just an energy news consumer. Plea — just a very simple plea. Try to always use the word gasoline for gasoline and use the word gas for occasions where it might apply to something that might be a gas.

Ms. Hagenbaugh: That is actually something that gets brought up because when I worked at Rueters that was a big issue. You never said it was petrol, or it was gasoline. And I always write it, and sometimes it gets changed.

Mr. Wallace: Don't let them change it.

Ms. Hagenbaugh: I will pass along your information to our copy guys.

Mr. Wallace: Grab them by the throat.

Ms. Hagenbaugh: Yes, you have to recognize gas is a shorter word than gasoline, and so sometimes that is how that happens.

Mr. Hall: Yes, Chris Hall, independent oil and gas producer from California. I enjoyed the discussion on ethanol because I think as an industry we spent $135 million to fight Proposition 87 which would have imposed a severance tax, but EIA and the country is focused on reducing our dependence on foreign oil by increasing investment in green energy. And yet the forecasts show the need as you referred to for large supplies of oil and gas and coal during the next 20 years. Meanwhile, the domestic fossil fuels are under attack in Washington, as well as state and local governments, to punish them for last year's high prices, for polluting the environment, to raise funds to offset deficits, to pay for development of renewable resources, all of which appeal to the public. For example, the Administration 2010 budget would result in the elimination of most of the R&D budget from Department of Energy for the oil and gas industry, would increase 150 percent in oil and gas taxes and a 40 percent reduction in drilling by one account. This will only lead to less domestic oil supply for our needs. How can the media help explain the problem so that we just don't make matters worse?

Mr. Rapier: I spend a lot of time writing about that kind of issue, and make no mistake I'm a big fan of alternative energy. I would like to see us produce all our energy domestically, but I'm a realist as well. I submitted a question to Secretary Chu yesterday. He did not take it, but it was along the lines of I find it very ironic that he is calling on OPEC to continue producing and at the same time domestic oil and gas has essentially no part in the

Administration. So I agree with that. I think the reality is we're heading down a path here where we're likely to increase our imports because we're going to disincentivize our domestic production. And I know the administration is counting on renewable to fill that gap. I don't believe that's going to happen. I believe they will play a part. I believe we should continue to fund that, but I'd also like to see the Administration take a more realistic view of some of these forecasts. Seventy-nine percent oil and gas, maybe that's not desirable, but that's what it looks like it's going to be. So we prefer to get that domestically, I think, as much to the extent possible, and I think we're just going to be importing it more from OPEC. We're going to be counting on Venezuela, and you'll hear future energy secretaries continue to call on OPEC, please don't cut us off.

Mr. Pooley: I see it a little bit differently in a couple of respects. And this is the point I was trying to make about forecasts earlier. This is not yet written. We don't know what our fossil fuel consumption is going to be in 2030. If it's still at 79 percent of our total consumption we will have failed in a very profound way. And I think the Obama Administration is doing absolutely the right thing by doing everything in its power, and I wish it was doing a little bit more in its power to incentivize alternative energies because I think it's absolutely crucial that we get those going. I mean, I think oil, gas, and coal consumption are a fact of our current lives, and that's not going away today or tomorrow. The fact is they have been incented in so many ways for so long that I don't — maybe I'm wrong here - but I don't stay up late at night worrying about the oil and gas industry. They've done quite well for themselves.

I worry about leveling the playing field so that clean energy can have a

fair shake against the oil and gas industry. And I think that's what the Obama Administration is trying to do. That's not to say that we can be Pollyannaish about how hard it's going to be to get there, about the fact that it is going to be disruptive, that there are going to be winners and losers, and that that needs to be addressed. I mean, this is a huge complex thing that a lot of us are writing and thinking about every day. But, I think, interest groups like oil and gas will—or do feel a little neglected, and I think that after all the years of attention that they've gotten a little of neglect for them right now when we're trying to get something else going isn't the worst thing in the world.

Mr. Anderson: Let's go to the rear microphone.

Mr. Saunders: Yes, good morning. My name is Gary Saunders. I'm with the North Carolina Department of Environment and Natural Resources. I appreciate a couple comments about the hour-long interviews and stuff like that because I often end up with the same thing. I see one quote, which then somebody takes out of context which is really interesting. The question really is this. A lot of us have a great deal of background in the energy market. We consume the EIA data with a certain amount of veracity. But what I find is other people that should be somewhat knowledgeable on these sorts of topics really aren't. In the world of Twitter, we try to put something in little bite size pieces. I struggle to convey, for example, the sense of scale when somebody says we can just put nuclear energy in like France does. And I say, "Do you have any idea of what you're talking about," to turn it around on them and say, "So would you like to live like the French?" We were doing a lot of French bashing a couple years ago. And they were like well, maybe not. So my question to you is how do we expand this conversation in a way that people become more

knowledgeable? I mean, I go into a classroom, and I do teach classes on energy and environmental issues. And I'll go into a classroom of people who are my peers and I say, "So how many of you know how much gasoline we use per day?" And rarely in a class of 40 people do I find one person that has any sense of scale whatsoever. So what do we do not only through the media but as professionals in this business to increase that knowledge space beyond where we are right now because the internet isn't doing it?

Mr. Mufson: I'm not sure what you do, but this is why I do what I do and there are different kinds of journalists, but what I end up doing is what you call explainer journalism which I haven't discovered Watergate, but I have tried to describe what the tradeoffs are in different areas. For example, maybe it's a legitimate thing not to want to drill offshore of the United States, but as a result, what are the consequences? And maybe we end up actually having more tar sands oil from Canada because we're not drilling offshore somewhere else. Or maybe we don't want to do that and therefore we're importing more from Saudi Arabia, or it means we need to make more effort on some other front. So what I'm trying to do is just explain what the overall situation is as much as possible so that people can make more informed choices. It's not that unlike some people here, I might not have as much of an agenda, but I do feel like that overall we want ideally to be making informed choices about what we're doing on policy areas. And that way hopefully we'll have a better chance of doing the right thing.

Ms. Hagenbaugh: And as far as what you can do I would say if a reporter calls and wants to have this conversation then be willing to do it, and also reach out to — if you reach out reporters. If you feel like someone in the

local community is a good reporter who might be wanting to have this conversation, but might not know that you're around, reach out to that person. They probably would be willing to talk to you.

Mr. Saunders: Well, our PIO is pretty good about know who within the organization is the person to contact. So, for example, I'm the hog czar in North Carolina. So anything that has to do with hogs, they know that they send them to me.

Ms. Hagenbaugh: But maybe you need to be sent to them sometimes is what I'm saying. Maybe approach that reporter because otherwise that reporter might not know that there is a hog czar. The reporter will be like I've been needing a hog czar, so then that way you can make the connection.

Mr. Saunders: Okay. Thank you.

Mr. Pooley: I don't think that we can wait for or we can expect a moment when there's perfect understanding on any of these issues among the broader public. I would love to be proved wrong, but there's so many things that folks don't get. They don't get the scale of the issue. They don't get the size of the climate threat and how hard it's going to be too overt it. There's a lot of stuff they don't get, and we don't have time to wait for everybody to get it before we act. And I'm a great proponent of getting started. We've been talking about CCS for years. Let's get some demonstration projects going and see if the damn things work. And that's why I'm optimistic about this Administration. Having done a lot in the very few months it's been in office, and everybody's sort of waiting now to see if they're going to push for serious climate legislation this year or not which would be sort of the next step beyond what they did in the stimulus package.

This mammoth energy and climate bill that might begin making its way through the House now I don't think can really move without a push from the White House. And there's a bit of a Catch-22 now because the White House may not want to push unless they think it can actually pass. And it may not pass unless Obama's willing to give it a push, or even then. So will the President actually spend precious political capital on this, or will he just wait and deal with health care. I think that's going to be the big story in this town this year, and I don't know how it's going to turn out.

Mr. Gradman: Hi, my name is Gideon Gradman. I work with ZE-GEN Company in Boston that's developing a way to gasify waste streams to simgas for boiler fuel. And my question actually follows up just on the last person's question really about the interaction between sort of us, the educated citizens on the topic and the reporters because friends of mine sometimes friends who are reporters here in Washington will call me and ask questions because they know —whatever it is, whether it's oil, and gas, coal, biomass, I've worked across the industries. So they'll often ask and call me and ask a question as to how different pieces of the industry fit together, and talk about how if you displace coal what happens. And I get very frustrated when I read articles, not your articles by the way which are all great, but other articles that I read often in the Boston Globe or other maybe less advanced publications where you see another reporter says that solar and wind will get us off foreign oil. And every time I read that, I say, "No, it reduces marginal coal use. It doesn't reduce foreign oil. Only transportations fuel reduce foreign oil." And I think those types of nuances are very often lost, and these tag lines are very often misused. And I think that when you have people like many of us who work in the industry, who

like to talk about the industry, and would love to interact more with the media, if only as a sounding board, I wonder besides my letters to the editor which you probably have gotten, to the extent that there are ways for us to proactively interact with you besides writing to the editorial page. I've done it on occasion reached out to a local reporter to either counter a point or suggest something else, and occasionally they call back. But I don't see, or I would love to understand your openness to people who may not necessarily be in a certain position, but who just know a topic well to try to help you through a story, and how might we do that?

Ms. Hagenbaugh: Personally, I'm always open to people approaching me. And there have been people I have met through the years who that's how — the main thing is not to call the reporter and say, "You just don't know what you're talking about." You're just not going to start off on a good foot, and not to suggest that that would be your approach. But, just to say this is my expertise. If you're ever writing about this, or a lot of times people come to Washington and they'll say can we get a coffee and have a conversation? And that's always something that I enjoy doing. The one caveat I would say is that for example, I cover economics and energy, and probably covering basketball soon. So, you have to keep in mind that these people are really, that reporter might be covering energy one day, and town hall - the newsrooms are shrinking. So that's part of — so I think a lot of times it's not the reporter didn't care. They probably don't have the understanding and haven't had the time to learn. So it helps if you can provide that. I love it when people call me and help me out that way.

Mr. Rapier: Write the story, send it to me, I'll post it.

Ms. Hagenbaugh: Just sending it to the editorial page doesn't get it to me. There's a wall between editorial page and — occasionally I'll get an email from someone on the editorial page and say does this person sound like a nut or does what they say make sense? But other than that, there's a real wall so that's not going to get to me at all.

Mr. Mufson: On a procedural level, if it's a letter they're thinking about printing, and it's regarding one of my stories, they'll usually send it to me and ask do I have a problem with this. At that point the question then becomes is the letter factually wrong in some way and misleading? Was the article wrong, and is it more appropriate for us just to run a correction, or should they go ahead and run the letter?

Mr. Anderson: This is a terribly interesting point. I had hoped that one truth that you all take away from this hour is reporters are open to calls from people who know about the subjects of which they're writing. This is their meat and drink. And if you think a reporter has got something wrong, you will be doing not only yourself but the reporter a favor by calling. And as Barbara says, you don't start off like a lawyer about to bring a suit, but you say there is another detail on this subject that you might want to know about. And any good reporter will perk up his ears at that point and say tell me about it. Email makes that easier. Let me repeat the distinction between letters to the editor which are intended presumably to be published in the paper. And simply direct communication, phone calls, email to the reporter pointing out an aspect in this story that you think is important and you're likely to get a response to that in my experience. Let's go to the back phone.

Mr. Simmons: Good morning. My name is Wade Simmons. I'm in

energy marketing sales, and I also work for a think tank that studies consumer behavior. My question is it seems to me that the print media does a pretty good job with the leverage that they have with delivering appropriate and substantive information to the public concerning energy. What I would like to know is how do you feel about your colleagues over in the broadcast media, and especially on how they covered last summer's prices dealing with oil and gasoline?

Mr. Pooley: I can't claim a huge amount of expertise about how broadcast journalism covered it because I haven't studied it. I really focused on print. And the reason I focused on print is that I didn't think that what I would find in TV would be very substantive. I mean, my impression of it is generally someone with a microphone standing next to a gas pump saying "isn't this expensive?" "What do you think?" And I know there is better stuff out there, but I'm not enough of a TV news viewer to have seen it.

Mr. Simmons: I'd like to follow up. Does that make your job harder in the print industry to try to get substantive information out to the public so the public can understand what's going on with these markets, what's going on with energy prices and why and how it affects them?

Mr. Pooley: I think it makes it harder. The quality of TV news isn't in a vacuum. It's a reflection of a more superficial and faster paced culture. So it's hard to do anything. It's a challenge to go deeper anywhere in any format. And I don't think broadcast is the only thing that's guilty of superficiality. You sort of see sloppy thinking and lazy reporting all over the place. Certainly not with these guys, but elsewhere, and often and increasingly in places where you didn't see it as much in the past just because folks are overworked and don't have enough time to do the job they would like to do if they had more. So I

think it's a problem.

Mr. James: Bill James with JPods. And question is how do we talk to the press and get them to write about a change in the way we're looking at things. Specifically, 1984 we began the retooling of communications infrastructure by demonopolizing AT&T and shifting back to performance standards. Currently in transportation and power generation, we operate off of central planning instead of performance standards. If we were to set performance standards similar to like CSX has — moves a ton of freight 423 miles on a gallon of fuel. If we were to set performance standards at 120 miles per gallon, and then open it up to industry to say how would you achieve that, it might be a different way of approaching it instead of saying let's get CAFE standards up 20 percent. How do we get editors to think in that framework?

Mr. Mufson: Well, as reporters we're not prescribing. But, in fact, I think the issue you've raised is going to become more of an issue this year during the climate debate because for starters, the Obama Administration is going to try to reconcile national fuel standards with the California Waiver. And I think that's going to be the first place where you're going to see something. And as you know, California is not a miles per gallon standard. It's emissions per mile. And then how you get there will be up to the companies. And certainly if cap and trade fails and EPA ends up regulating a whole variety of things, which I think is a possibility, including emissions from coal plants. I mean, I think you could see this approach coming. I think it's just you're a little ahead of where the public dialogue is, but personally I thinking it's heading that direction. So I think you'll read more and more about it.

Mr. Downey: Morgan Downey. Just written the book Oil 101. And

Robert, I read in your blog this morning that a survey came out earlier this week that said that more than half of Americans could not name one alternative fuel. And is there a role for books and other slow media in improving the average person's energy IQ and what books in oil would you recommend?

Mr. Rapier: Well, Morgan knows that I'm 250 pages into his book, which is a fantastic book, by the way. The survey you refer to, that was pretty disheartening to read that. I think 51 percent of people surveyed couldn't name an alternative fuel. Thirty-nine percent couldn't name a fossil fuel. Nineteen percent said I couldn't care less. I think you'll find and I see the same thing, interests waxes and weightings with oil prices. Oil prices are high. Gasoline prices are high. People want to know what's going on. So the best thing for your book would be for gas prices to start setting new records this year. People will pick up the book and they want to know what's happening? Why is this happening?

Mr. Downey: Any other books in oil you recommend, or what do you read?

Mr. Rapier: I've read a lot of different view points. One of the first ones I ever read was Twilight in the Desert which I think is a good book. It has some faults, but it kind of brings attention to the potential issue with Saudi Arabia. So that was one of the early books that influenced me. I don't know. Within the industry, I'm reading technical books on refining. And this is what I told Morgan, that his refining section is incredibly detailed. I don't think there is a popular book that exists like that with that kind of information. Within the refining industry I've got technical refining books, and those are the things that I read to — how do we troubleshoot the cat cracker - and you don't go into that sort of

detail, but for a lay person who really wants to be informed about energy, I can't give your book a high enough endorsement. I think it's a fantastic book.

Mr. Pooley: In the geo politics Dan Yergen's The Great Game is a fantastic book. And to the point about the poll, it reminded of the focus group where somebody said we don't use coal anymore in this country. We have electricity now.

Mr. Rapier: Gusher of Lies by Robert Brice, I really like that one, too.

Mr. Duker: My name is Joe Duker. I'm a long time independent energy analyst and non-resident senior fellow with the Center for Strategic and International Studies. I have an offer, a comment, and a question, but they're all brief. The offer. This year I'm president of the US Association for Energy Economics. I hope that John Anderson's suggestion to EIA that they have a tutorial about energy statistics for this group works out. But if it doesn't, as president of a member organization of about one thousand people across the country in government, NGOs, industries, think tanks, academia, I offer a back up if the EIA can't do it. The comment. I'm sorry that with all the stimulating discussion about oil, there wasn't a little more discussion about electricity. And maybe it's not too late for you to make some comments about the fact that many people who write energy stories, and many columnists, don't know the difference between a kilowatt and a kilowatt hour, or even the difference between a kilowatt and a megawatt, and a gigawatt, and those are important things.

Finally, the question. Eventually the media did discover some of the truth about ethanol, and they're beginning to discover some of the truth about Boone Pickens. But one of his numbers — and I think almost every one of the

numbers he quotes on television is wrong if you check with EIA. But one of the big numbers he used right from the start is that we are paying $700 billion a year to import oil. Now the real number last year was closer to $400 billion than $700 billion. You might say what difference does that make when we're talking about trillions? But its evidence that nobody bothered to check that statistic. And then John McCain picked up the number and started using the same phony number, $700 billion. This year it will probably be closer to $300 billion. And then other presidential candidates began to use it, and I have yet to see anything in the press about the fact that one of the big numbers he started to kick off his $50 million plus campaign was just invented.

Mr. Rapier: I have a big issue with fact checking myself. I saw that with the SPR, Strategic Petroleum Reserve. The rate of fill that was reported and picked up and reported and reported was wrong. I showed the actual numbers from the SPR. It was about half what the reported fill rate was. And those kinds of things annoy me. And I wonder why more people don't. Somebody, somewhere calculated a number based on some monthly fill rate and extrapolated it for a year, and it was just wrong. And then everybody picked it up and just ran with it. So I sympathize.

Mr. Mufson: I can't remember what we said about the $700 million or whether we used that number. We've run two pieces as far as I know about Boone Pickens. I wrote one of them. I think the essence of it if I had to pick out one line about it was that it's hard to tell whether Boone is putting his money where his mouth is or whether he's putting his mouth where his money is because obviously he has an interest in the natural gas as being used as a transportation fuel because he's a major stakeholder in the leading company

that's supplying gas for motor vehicles. We've tried to avoid getting carried away with all that.

Mr. Anderson: Let me go to the rear microphone, and this, I'm afraid, had better be the last question because we have arrived at 10:30 more or less, and we are enjoined to close at that point. But let's have your question.

Mr. Kopits: My name is Steven Kopits. I'm the managing director of Douglas Westwood, and we do oil, gas, and renewable market research and strategic advisory. I think one of the trends that I've noticed to pick up on some of the other speakers is that the general poor quality of fact checking and editorial control over some pieces. Just to indicate one from the economist which said that at a conference a scientist that said sea levels were rising twice as fast as expected. Now sea levels are actually tracked by satellites at the University of Colorado and it's readily available on the internet. But it was apparent that this reporter had not bothered to type into Google, sea level, and similarly his editor had not said have you typed in sea level into Google and checked? I think as a result of that — and this is true not just of energy - it's true, for example, of finance as well which this recession coverage has been dreadful and very opaque. But one of the results that I find is that increasingly specialized blogs are taking over part of the reporting and part of the editorial function from newspapers. And I just mention one here because I noticed two slides from one site which is called E-Con browser run by an economist named Jim Hamilton — in fact one of the slides from Secretary Chu's speech was from him yesterday, the one on recession in oil, and one from Adam Sieminski from Deutsche Bank in this room yesterday was also from him. And it's interesting now to me to see that in fact specialized blogs are beginning to usurp the

traditional role of newspapers in providing information about topics. And I'd be interested in your comments on that.

Mr. Pooley: I'd agree that it's happening, and I think that some of the commentary and discussion that's taking place on newspaper websites is more advanced and more interesting than what makes it into the print version of the paper because like the specialized bloggers, the newspaper bloggers, say on the green energy beat at the *Wall Street Journal* maybe just to throw out one example of what I have in mind —can assume on the part of the reader a deeper level of knowledge and interest than perhaps the editors of the print paper are assuming about the person reading the print product. So I think it's not just a function of specialized blogger, good newspaper/bad. There's more confidence in going deeper if people are able to select that site because they're interested in the topic, and maybe and I don't work at a daily newspaper so I am speculating here, and I'd like to hear what the folks do that work at a daily newspaper have to say about this because I've wondered about it — whether there's a sense that no we can't put that in the paper, it's a little too technical. We'll put it on the web site instead. Has that happened?

Mr. Mufson: It's not happening yet. It may be happening more. I think that it's safe to say I know a ton more about every story that I print in the paper than makes it into the paper. Let's just use today's story as an example on cap and dividend. I've had conversations with various people about the disadvantages of cap and dividend even though there's a lot of kind of appealing things about it. And the story is just too kind of try to prompt conversation about another possible cap and trade method. But, in fact, there's interesting argument about whether you'd be better off reducing tax rates, and

that's kind of a little more technical economic discussion that I'm perfectly capable of having, but there is neither space in the paper nor appetite among most of our print readers for that.

So, the question I think going forward is —and we've been having these discussions a lot this week. To what extent should we be doing fewer stories or more stories? That's a fundamental issue. If I do fewer stories I could possibly focus more on things that you might not be able to get elsewhere on the web. On the other hand maybe we really want more hits and page views and things like that in which case maybe I should be doing more stories. And maybe they should be more like the blogger you're talking about. But, then maybe I need to specialize more in which case we have to decide what areas of coverage do we want to abandon. I could do a blog and I know Adam, and he sends me his stuff. I could talk about that and contact some other people doing the same thing, but if I do that, I'm not going to be doing something else. And if you're more interested in that something else, maybe you won't be so happy with that choice. So this is what makes it difficult, but I would urge you to at least consider the possibility that we're trying our best to do as deep a job as we can on as many subjects as possible at the moment. But we're going to have to be making more of these choices for exactly the reason you mentioned.

Mr. Anderson: Let us leave it there. I've learned a lot here. I hope you have, too. And I hope you'll join me in a round of applause. Thank you all very much.

[Dead air time between sessions.]