

Dean's Executive Leadership Series - 2008-2009

Transcript of Presentation (Part 2) with Elizabeth Lowery, VP of Environment, Energy, and Safety Policy for General Motors

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Announcer: The Graziadio School of Business and Management at Pepperdine University proudly presents the Dean's Executive Leadership Series. This podcast invites top business practitioners and thought leaders to share their view on the real world of business.

Dean Linda Livingstone: Thank you, Beth, it was interesting to hear about the work you're doing particularly on the energy efficient side and I want to ask two or three questions and then we'll open it up to the audience 'cause I'm sure you all have many questions for Beth. And I want to talk a little bit about just the role the Government is playing in GM right now. And let me start kind of relating it to some of the things you were talking about and maybe thinking about it sort of independent of all the restructuring and everything that is going on. But what role do you believe is appropriate moving forward for the Government in terms of helping to bring about some of this transition in and energy efficiency and putting in the infrastructure to have the right kinds of fuels available. How does the Government play into that process of making that work so that the kinds of automobiles that GM and others are developing will have access to what they need?

Elizabeth Lowery: Yes, I mean ,it's very important when you look at where General Motors is now the Government has a major role in what we're doing every day. The Automotive Task Force has been very very good to work with as far as really learning our business from the bottom up, how we design vehicles, how we sell vehicles, every aspect of the business. But in the environment energy equation there's a role for automakers. Certainly we have the important job of making sure that technologies are out there that we're doing what we can to reduce CO₂ emissions to improve fuel economy. But in order to do that you

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have to have a system. You have to have the automobiles companies doing what they need to, the energy companies doing what they need to do and you need Government to have a role to really develop the infrastructure. So as we have these great scientist and engineers that are designing these vehicles, if there's not a place for people to plug in their vehicles at the end of the day at their home-- the Volt can certainly do that easily. But if you're in a complex or you want to do it at work and you want to understand the smart grid everybody has to work together on that.

Developing infrastructure such as hydrogen, California and the fuel cell partnership along with the Hydrogen Highway Program has been doing a good job of trying to develop that infrastructure. We need to do a lot more and we need to do it at a national level and the same thing with bio-fuels. We really need to develop the infrastructure so that when these next generation bio-fuels that are so important to reducing dependence on petroleum, when they're available and ready we need to have stations where people can take their flex fuel vehicles and be able to get the right fuel.

Dean Linda Livingstone: So you've mentioned a couple of times Automotive Task Force. So give us sort of an Automotive Task Force lesson 101. In what their role is in working with you, how GM works with that task force and how that's going to play out over the next few weeks and months as GM works through these issues and works through the possibility of bankruptcy.

Elizabeth Lowery: The Automotive Task Force has representatives from all areas of Government. So in the area I work there is someone from EPA and Department of Energy, all those various agencies are involved. They spent-- a group of people have spent a lot of time in Detroit. We've also gone to Washington but they've looked at every aspect of the business so dealing union situations. Dealing with what we should be doing with dealer restructuring, looking obviously at the financials, working with the bond holders, so all of those different pieces of work have been going on. The task force is obviously very interested in making sure General Motors is setting up a viable business for the future and we'll continue to work through that process with them.

Dean Linda Livingstone: As this process moves forward, one of the comments and one of the discussions we were having earlier, you commented that at the end of the day GM will very likely be owned majority by unions and the Government. A very different sort of ownership model than has been the history of GM and a very different ownership model than in-- probably any company has experienced before. How do you see that playing out and how does that impact the company's ability to continue to innovate and try to succeed in the environment that we're in given-- I mean I think we don't always think

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of Government and unions overly innovated and quick to change. And so how does that play out and how do you see that working in terms of sort of a Government structure?

Elizabeth Lowery: Well we're sort of not sure how it all plays to because we're inventing this as we go. But I think that there is a commitment for innovation and making sure we're setting up a business model that will be successful. We have, in the auto industry, had the same business model and we've the same kinds of products for a hundred years. And the question is as the world is developing and all the various countries around the world want personal transportation does that model work? And clearly when you see the down turn in the global economies, our business model does not work. And so what we have to do is continue to work with the various stake holders going forward because of the intense, you know, legacy cost that we have from a pension and health care that's really the v-bar or the voluntary benefit program that is really with the UAW as well as the Government funding it will be a very different structure.

But the core of our business is making great cars and trucks, making sure that we have high quality, great designs, making sure that we do our part, as I mentioned, on fuel economy and emissions. I mean that's the core of the business. If you don't have great cars and trucks and have a great relationships with customers, it doesn't matter what kind of business processes you have or what kind of great functions you might have that are doing great at purchasing or suppliers or whatever. So we need to get back to our core business, which is continuing to do that.

Dean Linda Livingstone: One last question I have for her and then we'll open it up and see what you all would like to ask about. But again in an earlier discussion we had, you commented on how public everything is about GM. And I mean it's been a public company for a long time. But what you're going through right now is far more public and you even make the comment that you're competitors sort of know everything there is to know about you because is it is so public as you go through this process. How does that affect, sort of, your ability to operate, be successful as a company when everything you do, you know, in some ways there is no sort of competitive advantage to any knowledge that you have because it is out there. So how's the company responding to that how has that changed the way you operate?

Elizabeth Lowery: Yeah it's very challenging because it's always good to be transparent. But certainly in the business world you have a number of things that are competitive. For example we had to go for initial funding we understand that tax payers need to know exactly what we're doing, what our viability plans are, but having to lay out our future product programs. And even in my world showing people what we predict our fuel efficiency will be. Well people can exactly, you know, reverse engineer and know what kinds of products what size of products, what kind of technology you might be putting on and so it

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really is a totally different environment. But I do think we have maintained the ability to continue to have innovation and make sure-- obviously we still have intellectual property rights and a number of patents, for example, on the Volt or in the Chevy Fuel Cell Equinox vehicle you saw. So I think it's a challenging environment because everything is laid out there. In some ways it presents a great opportunity, you know, everything is out there. And so in working with Government and working with all of our various stake holders, everybody sees everything and so everybody has to join with us to figure out how do we solve all of these problems and move forward in a way that will be successful in the future?

Dean Linda Livingstone: What questions do you all have for Beth? Yes, Gary.

Gary: Thank you, by the way excellent presentation.

Elizabeth Lowery: Thank you.

Gary: I thoroughly enjoyed it. I'm asking a question in the area of the electric, not the hybrid necessarily, but the pure electric vehicle. And as the demand let's say with the Volt and similar type of concepts take hold and that technology, you know, begins to flood the market place and the demand on the grid because much more greater, in your opinion, how are the energy companies dealing with this? Because we certainly don't want to generate electricity with a fossil fuel burning power plant to power the electric car. So, you know, the nuclear power concepts don't seem to be gaining a lot of momentum. So how do you think the energy side of the equation is going to balance out?

Elizabeth Lowery: Yeah very good question. Certainly when we look at this really wanted to look at it as a system. So as we look at electric vehicles, that's why we have a partnership with the Electric Power Research Institute making sure people are looking at the various aspects of energy. I think a couple of things have to take place. You have to have a natural energy policy and you have to get serious about what our country wants to do on the renewable energy front, the so called greening of the grid. What we think is exciting about things like the plug in hybrids and also the electric vehicles is the fact that if you green the grid, if you get a more renewable source similar to a lot of the activities you have in California, then you'll also greening transportation. And so we would have the ability to be able to do both at the same time. We also have to look at things such as climate policies, climate change. We're members of the U.S. Climate Action Partnership working on-- at a national level. Can we get a cap and trade program in place so we can have a cap on emissions and then figure out how you trade and figure out how trade and figure out the various renewable will be adjusted by their low carbon fuel standard for transportation, renewable fuel, standard for energy companies. But you're right it's very challenging. It's very

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challenging with respect to nuclear, you know, how long does it take to put a nuclear plant in? We just decided we're not going to Yucca Mountain anymore so how are we going to store nuclear waste and are we serious about really getting to, you know, clean energy sources for the United States? But again, I think there is progress being made, depends on what state you're in as far as how much renewables. But I think over a period of time, if we have a commitment, we certainly can do that.

Dean Linda Livingstone: You had a question. Did you have a question back here?

Man 2: Actually I have a few of them.

Dean Linda Livingstone: Start with one then we're work through as we go through.

Man 1: Yeah. A simple one first. I didn't see any mention anywhere of Corvette, you know, in any of the slides. I wonder if that's going to survive. And also GMC and Chevrolet truck would seem to be direct competitors. How do you see that working out?

Elizabeth Lowery: I thought he was going to ask me a tough environmental question from the reception questions we had. Corvette is alive and well. Everybody loves the Corvette. My neighbor just asked me that because he wanted to buy one and he wanted to know if it was going to be around. Yes, Corvettes will be around. It's obviously a very popular vehicle. I just mentioned the Camaro because it was new, I was just highlighting some of the new vehicles. And we have looked at, as you know, intensely at all the various brands. GMC and Chevrolet do have trucks, both have trucks in that brand. But GMC is a very very successful brand for us, works very well, there is very good set of loyal customers. And so at this point, they're not in competition with each other. They do have a set of customers that work on Chevy trucks and work on GMC trucks.

Dean Linda Livingstone: One of my earliest recollections as a child was the GMC truck that we had on the farm I grew up on in Oklahoma. It was a light blue GMC truck and I remember that.

Elizabeth Lowery: I like that story. We can get that in as a commercial.

Dean Linda Livingstone: Okay back here. Let me go back here. Go ahead. Go ahead.

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Man 3: I have a question when you talk about electric vehicle. One of the big issues is when you plug it in, it takes quite a while to recharge the battery. And in some instances you say if you travel over 40 miles, is going to take you about eight hours to recharge the battery. Are you working in super capacitors or other technologies that will enable you to charge rapidly the vehicle and that way eliminate the issues associated with having to park your car to charge for a long time?

Elizabeth Lowery: Actually there's been tremendous progress on the battery side in really looking at how the lithium ion batteries will progress so we can enable something like the Volt. And so our battery labs and our engineering folks are looking at all the activities to try to improve the battery charging time et cetera because, you know, people don't-- we're pretty anxious to be able to get up and go anytime we want. The nice thing about the extended range electric vehicle though is that you're able to generate electricity while you're driving. So it's not relying just on, you know, the plug in charge. But our folks are looking at all those aspects of the vehicle.

Dean Linda Livingstone: Back here then we'll come down to her. Yeah.

Man 4: Thank you for your insightful remarks. Most of what we see is values with GM. My question is the amount of scientist and engineers at GM, probably more than other auto company. There's a lot inventions going on, a lot of researching, not just related to transportation, but to materials, to electronics, to safety, to the environment and all of that. <inaudible> What is it about the platform that up until recently, cars looking the same, similar features similar stuff in them why does it take so long to actually invest and take advantage of new products?

Elizabeth Lowery: Very good question. I like the compliments at the beginning of the question. <laughs> You're right. There are wonderful scientist and engineers at General Motors. I remember when I first came as a lawyer and I-- my first permit I was working on, I was just amazed by the research capability and all of the engineers that are at General Motors. Many of the innovations and inventions are taking place it takes a while for it to get into product line ups. I don't think that you need just to General Motors. Many of these are things that we have to make sure that customers are going to accept. There are also tremendous regulatory pressures on-- we're probably the most highly regulated product in the world. So there's all those tensions that have to go through. There's also in the United States frankly there is a lot of litigation. So a number of the issues with respect to a certain technology there's a lot of things that you have to go through and test and get satisfied for all the various agencies before it can actually go on the product, which is unfortunate that would sometimes stifle innovation. But that's just the nature of the business here. Some of the other companies do try out various innovations and

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technologies in other places in the world. But, you know, we are, you know, based here in the U.S. from a general standpoint. So what we're trying to do though is get faster to market. I mean that's very important to do in a competitive way and be able to get these technologies so that customer will accept them and also can afford them. One of the most important things for us is we have great technologies but if they're not affordable and we can't get them out in high volume, they're not going to make a difference for environment, safety, et cetera. So we're always balancing all of those issues.

Dean Linda Livingstone: Down here in front then we'll come back to you.

Man 5: I'm wondering about the human side of change. And I'm wondering if you've given thought to-- I've been hearing about eco driving how one accelerates, how one breaks, et cetera, whether there is going to be a learning curve for the consumer and how tough will that be and has GM thought of how they will tackle that?

Elizabeth Lowery: Actually I thought you were talking about the cultural change with everything that we're going through. See my mind automatically goes right there. Yes.

Man 5: Yes and your experience.

Elizabeth Lowery: Yes. And what we've done is as we're developing these technologies, we've had the engineers and scientist working on the product development. We've also had education efforts under way. And so for example the fuel cell and project driveway, getting customers behind a fuel cell vehicle and understanding what it's like to be able to use hydrogen and how it sounds differently. There also is very much an interest in the eco driving piece, you're absolutely right that customers have a role to play in how much fuel you save and how much emissions come out of your vehicle. And so making sure there is an education effort is really very critical. And we, you know, we'll continue to do that. The Alliance of Automobile Manufactures does have an eco driving program. We've had some activities for some time with respect to web site activities and customer interaction and dealer ships. We also have a K-12 program we had *Weekly Reader* series talking about what it would be like to have a hydrogen fuel cell vehicle. What would it be like for a plug in, did a whole series on bio fuels so the next generation is very familiar with these kinds of activities as opposed to some of us that have been driving the same thing for so long. We want them to be very familiar with the technologies.

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Dean Linda Livingstone: Well while we're talking about behavioral changes, talk a little bit about the cultural changes that are having to take place and how you bring that about in a culture that's been around for over a hundred years and get people to change more quickly and innovate.

Elizabeth Lowery: Yeah it's very challenging. We were talking earlier, "A crisis," as one person in Washington said, "is a terrible thing to waste." So you have to make sure you're really focused on the important aspects. And there is a lot of opportunity and you don't have a lot of time. So one of the cultural changes is people have to take more risks. Have to be accountable for your decision, but also recognize that you need to have, you know, the data in front of you make the decision but you can't wait.

We don't have a lot of time to wait or to get more data more information. So we're kind of operating on the 80/20 rule, you know, try to make the best decisions you can with the data in front of you. We do think at this point in time if we wait too long to make a decision it has, you know, serious consequences so the question of how do you get these things fast to market? How do you take more risks? Certainly not taking the risk on quality or the focus on customer and things like that. But making sure that as a culture that we're willing to step out there and be very different. When you're reinventing a whole company as we talked about there's not time to do the how do the, people feel from an organizational development standpoint, get input from everyone. Some of these things you just have to say, "This is the decision." And then get people to, you know, buy into it that way.

Dean Linda Livingstone: Let's go right here.

Man 6: First of all I want to applaud you for the efforts that GM doing with fuel technology. So my question is kind of referring to that great change in the culture of GM. So my question is the following. Japanese companies have a first moving advantage when it comes to hybrid technology, 1989 Honda introduced the Insight and now Toyota is doing great things with this energy type. What advantages or what disadvantage does GM have now entering that segment, especially with the image American manufactures have in industry with being laggards as far as truck platforms? So what do you see as some of the challenges brewing through that segment? And number two, with the introduction of some of these new vehicles, what do you see that doing <inaudible> with prices?

Elizabeth Lowery: With respect to the hybrid, certainly Toyota and Honda have had an advantage in the market place. I think it's very interesting to see that dynamic in the market place right now with Toyota and Honda their competition with their new hybrids. What we have decided to do our hybrid program was a little bit different. We had a hybrid system it was on our bus systems and then we put it in our larger

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vehicles, our SUV's and our trucks because really that was a strength for us. Many customers come to General Motors thinking all we have is trucks. And as I mentioned during the presentation we have a lot of cars and cross over's as well. But we thought it was important to put hybrid systems on trucks and SUV's because if people wanted the functionality of an SUV or a truck that we wanted to be able to give them technology that would help them save fuel. You save more fuel that way than you would putting a hybrid system on a small vehicle. Now that was our strategy right or wrong, that's what it was. And as we progress on that strategy we now are entering obviously into the car market.

We felt with the Chevy Volt, it was an opportunity to kind of reinvent the whole-- look at that whole segment of advance technology. So being able to have an extended range electric vehicle where you can actually plug in and now you see that others are coming in with plug in hybrids as well. So I think what we were trying to do there is we have our hybrids we have our flex fuel vehicles. We have our fuel cell vehicles we're playing at all those because frankly we just don't know which one is going to be a winner or if there's going to be just one solution, which we don't think there is. So then we have to say, "Okay, how can we show that we really are innovative?" And that's where we came up with the elegant solution of the extended range electric vehicle.

To answer your question with respect to models and price points. That's a challenge for us in this current economy, obviously. And what we want to try to do is make sure that we have the best fuel economy in the segment, the highest quality, great design and then be able to price the vehicles for the value that they bring and try to get away from the incentives. The incentive program is interesting. I mean that was all started after 9/11. I don't know how many people remember the Keep America Rolling advertisement and incentives because we really wanted people to get back to getting out and purchasing vehicles. What happened though is, we never stopped those incentives so they served a purpose for a period of time was to get people in the show room, get America back shopping and producing great vehicles. But then the incentives kept on for a long time and that kept the competition in the market place and we got away from the value of the vehicle. So we want to try to, you know, get back to that world.

Dean Linda Livingstone: One of the challenges right now for you and I assume Chrysler is probably experiencing the same thing is just a great reluctance on the part of consumers to buy a car given the challenges that you're dealing with. How do you get past it? I mean do you have to get through the threat of bankruptcy of the bankruptcy and get to the other side of that? At one point because it's sort of become a vicious cycle downward in trying to build back that confidence and how are you all talking about that? What are you doing to try to overcome that?

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Elizabeth Lowery: Well it's very challenging for example for everyone in the global economy. I mean some of our competitors had the worst losses that they've ever had so this is not just a GM issue. What's happened though is because we can't get off the front page of the paper that there is a reluctance by some. I mean, we still have some very loyal customer and people that are coming into the show room just not enough of them. And so I think what we need to do is continue to communicate and get through this challenging time, make sure that people know that we have great cars and trucks out there. We have to figure out the whole dealer piece of it.

So there is going to be a number of bad news days before we get beyond this. And what we're trying to do is, again, just trying to communicate over and over again that we're here, we're reinventing the company, we are going to go down to the four brands, really better models high quality vehicles and get people, you know, back in the show rooms. The fact that the economy will get better at some point, and it will get better. Then that will also help because a lot of is the overall economy issues. Now one of the things that we talked about last year was just the talk of bankruptcy was something that we would not do because of all the focus groups and all the research we'd done had shown that that was going to really scare people off. It's helped with respect to the Government having the warranty backed so that people can go in and know that their warranty will be honored.

Dean Linda Livingstone: Great. Wonderful. You had a question right next to him. Did you earlier have a question, yes go ahead.

Woman 1: I have a question about the Toyota Prius and yet the <inaudible> manufacturing in November 40 miles a gallon so how do you compete in the market place and have you <inaudible>.

Elizabeth Lowery: Yeah. Obviously I didn't do such a good job already. The 40 miles is 40 miles without using a drop of gasoline. So it's not the equivalent of 50 miles per gallon in the Prius and what happens is the EPA doesn't have any test procedures yet, so we're working with them on how do you calculate the fact that you're going to go 40 miles without using any gasoline and then you're going to be using some gasoline on board to generate electricity? So it will be way beyond the Prius number. So that won't be hard to market. There will be other challenges when people are trying to be able to get into the market place and compete with that. But from a comparison standpoint that will be fine.

Dean Linda Livingstone: Let me got to Bill then we will go back over here to Steve.

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Bill: Is developing a superior marketing program part of your future planning strategy?

Elizabeth Lowery: Yes very much so. One of things that we have learned through this challenging time is there is a tremendous gap between perception and reality. There is just a, you know, decades of people that really have had maybe one bad experience with GM cars in the 80's and have never come back to learn what our products are like today. So we have a tremendous gap. And actually there are many believe that the difference between our success, or not, is based on our ability to be able to communicate with that and advertise and market in such a way that it gets people back into our products, which is key to our success.

Dean Linda Livingstone: So related to your comment, if you had to identify sort of the biggest misperception out there or-- especially in all this media coverage the thing that's been said about GM that's the least true or the most misleading what would you say if you could clear up some misperception?

Elizabeth Lowery: Well on the product side I think the misperception that we only make trucks, that we have a low fuel efficiency, which you see from all the data we have very very good fuel economy and segment leading in a lot of the areas and then quality perceptions. GM makes very very high quality vehicles that are top of a number of charts and it just-- it just doesn't break though. And again I think it's, you know, you sell a car one person at a time. So if someone has, you know, the story has a good experience might tell a few people someone has a bad experience they tell hundreds of people. So I mean it's trying to get people back into the cars because they're very different than they were in the past.

Dean Linda Livingstone: Steve.

Steve: The public transportation out here is not the best so we depend on cars. But public transportation the quarters in the meters are at least 30% of what it costs in public transportation. So everything is subsidized. And I'm wondering, I mean the ultimate question for me is, I can get passed the quality barrier, when consider purchasing a car. But, can GM actually make money with this new technology or is it going to be a potential subsidized by the Government? If that's the case should it exist?

Elizabeth Lowery: Yeah. That's a very good question. First generation of this technologies are expensive. So I think in some of the conclusions from the Automotive Task Force they talked about the Volt, the first generation, being expensive. And so what you need to do and anytime you're inviting technology such as this, the first generation is expensive. You have to go through three or four

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generations just like the hybrid systems have gone through that to get them affordable. And that's very important to do. No technology or no business as you all know from studying here you cannot survive if it's going to be subsidized the whole time. The market must drive people to this in great volume for it to be successful. So it is very important-- now we'll see how it all shakes out with respect to which technologies and can we drive down the cost of all these technologies as well as continue to make the improvements in the technologies. But we believe that from the research that we've done so far on the extended range electric vehicles on fuel cells, the great development of the batteries, that we think the electrification along with continuing the push on bio fuels that we should be able to, over a period of time, get them to be market successful.

Steve: Do you have an estimated time frame for that?

Elizabeth Lowery: I get asked that question quite a bit. I do not have an estimate, especially in this environment, I don't know.

Dean Linda Livingstone: You have a question.

Man 7: Yes. I was fortunate to be able to go to that California Auto Show in Sacramento last month. And I was very impressed with the hydrogen vehicles that <inaudible>. I was also impressed with the number of auto companies working together in a partnership. And I guess it's interesting that there are a lot of different choices as far as what type of vehicle you can get. But I think that maybe consumers-- and then maybe you can explain how you're going to address this, the consumers are a little concerned like, "Okay if I get this electric vehicle and it's a plug in and that will only work for this situation and will that be updated? Is there something better to come? Should I just wait?" So how would we...

Elizabeth Lowery: Yes. There is a lot of confusion out there. We've talked about that a lot in our company because, you know, it's much easier if you have one thing that your constantly marketing communicating. But we really do feel that it's important for us to be part of this overall solution and in order to that we know that we have to work on these various pathways. Again, customers basically when they go into a show room as you all know, I mean, you want to look at what your personal needs are and what you can afford and what you're functionality, in the product and what you need. So it's important that, you know, one customer at the time we try to get that education. But there is a lot of confusion out there. And I think that working with Government, working with schools, working with a lot of different stake holders, we can really improve on that because there is a lot of misperception on, you know, how plug ins work, how electric vehicles work and that kind of thing.

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Dean Linda Livingstone: To what extent, in response to that kind of issue, is there any collaboration among the companies in the auto industry versus it's working with the Government and others? Because part of that is an industry issue not just a GM issue or a Toyota issue.

Elizabeth Lowery: Yes. We do work with the Alliance of Automobile Manufactures on some eco driving, the education pieces of it. But I think that we can do a lot more. There's some great organizations, for example, there was a lot of confusion about diesel for a period of time. So there was a diesel technology form that's done a great job on educating people about new diesels and clean diesels and things like that. So I think that we need to do a lot more of it in this area.

Dean Linda Livingstone: We're going to take just a couple ore questions. So let me-- since she's asked one I'm going to go to some folks that haven't we'll go back up here.

Woman 2: The only place you can get the <inaudible>fuel is in Long Beach and we live in Agoura Hills.

Elizabeth Lowery: I've been working on this for some time and it is frustrating and I think it's very frustrating in California. I thought we really were making progress and we have not been able to get the fuel. I think some-- obviously the price of fuel, gasoline being low does not help. But I think with the new Obama Administration we're going to see more commitment for our stations and I think that's going to be across the country. They, you know, obviously are very interested in us making sure that we're making more flex fuel vehicles and we've had a lot of conversation about that's great we're committed to doing that, but we really need the stations. We need them across the country. And it doesn't mean that we need four on every corner like gas stations, we just need it in a decent location so people will be able to have access to it in a little closer and more convenient than that.

Woman 2: Near the airports?

Elizabeth Lowery: Yeah. Yeah. And we've had some great people that work on infrastructure both for hydrogen and for E-85 and I think we'll make more progress going forward. But together with some of our partners we've put together, I think, about 700 stations where we brought ethanol partners together with General Motors and other folks to try to get stations in. But it just has not gone as fast as it should.

Dean Linda Livingstone: Why don't you ask our last question?

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Man 8: Thank you. One of the things that's consistent though all of the vehicles that you've shown for the future is they're all <inaudible> steel or aluminum. And that makes them massive <inaudible>. One of the things I've seen for example in small aircraft there are very few being made out of steel these days and a lot more being made out of carbon fiber and other exotic material. Do you see that as something that will be a part of the equation as we go forward to use different material that will still be safe but will also allow you to reduce the weight of the car?

Elizabeth Lowery: Yes, absolutely. Looking at materials, getting weight out, we talk about at some of our meetings some of the most important thing at some of these is to get the weight out because you don't have to put all these advanced technologies if you can get smaller and lighter weight vehicles. Did Amery Lovins, from Rocky Mountains Institute have you ask that question?

Man 8: No.

Elizabeth Lowery: <laughs> Every place I go he has this carbon filter and carbon <inaudible> and this is going to work, the carbon fiber. It's a little more difficult in the automobile industry, first of all expense. And also with respect to safety and all of the various interactions that happen on highways and freeways across the country. So we've been looking at materials, we have some of the best material science people. So we want to look at light weight material and also just the size of the vehicles as well. So a very important piece of what we're going to do on fuel efficiency.

Dean Linda Livingstone: So my last question for you, you commented on how many negative stories there have been out in the media about General Motors in recent months. So if you could write the head line on the Wall Street Journal about General Motors two years from now. What would you want that headline to say?

Elizabeth Lowery: That's kind of a tough question. Two years from now I'm doing day-to-day.

Dean Linda Livingstone: I was trying to give you a chance to get out of the day to day and look at head. Look at the future.

Elizabeth Lowery: Hopefully from two years from now I would say GM Successfully Reinvented the Company and the Chevy Volt is the perfect example.

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Dean Linda Livingstone: Great well we really appreciate you being here I know this is such a challenging time and we appreciate you taking the time to be here and educating us in a different way than we maybe get educated on a daily basis. So we appreciate it so much and certainly learned a lot in the process.

Elizabeth Lowery: Thanks it was great questions, appreciate it.

<applause>

Dean Linda Livingstone: I want to thank all of you for being here remind you we did a pod cast earlier so you can listen to that on I-tunes University shortly and then we will take the video and we will also have that on Pepperdine's YouTube University. So if you'd like to reflect on this or share it with others you will have the opportunity to do that. But we look forward to having you back with us next year for the Dean's Executive Leadership series. We will be putting that series together over the next month or two and then getting that information out. We really appreciate you being here and being a part of this year. Thank you.

End