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Thank you. First of all, I'd like to thank the organizers for inviting me to this conference and also for bringing us all together. This is a very timely conference. I don't think the organizers realized when they were planning this conference, that we would choose this week to celebrate the introduction of the clean vehicles and clean fuels last Monday.

Why do we care about clean cars? As Alan Lloyd mentioned earlier, the main concern that we have is public health and the impact to the environment. As EPA is moving forward to implement the new ozone and PM standards, over 130 areas will be designated across the United States of not meeting air quality goals.

Close to 110 million people would be breathing unhealthy air. However, one of the most significant contributors of improving air quality in this country has been cleaner cars, cleaner trucks, cleaner buses and cleaner fuel. And this has happened despite a number of factors: increase in population since '97 to 40 percent; increase in economic growth; increase in the number of vehicles that we are driving every year and the miles that we are driving every year. So I think it's very appropriate for us today, as we did on Monday, to really celebrate the success story of cleaner vehicles and cleaner fuel.

What I'd like to do today is to briefly go over our success stories that we have achieved collectively because it has not been EPA's work or the Japanese government's work or Alan Lloyd's efforts in the state of California. I think really it has been a collaborative effort between governments, both at the federal level, state level, local levels and also the regulated industries.

So we need to stand back and really celebrate the success that we are seeing from cleaner vehicles being introduced in the market place. But at the same time, I think we need to continue to ask the question, "What more needs to happen in order to continue to address emissions from vehicles in a way that we could have a sustainable transportation sector?"

We believe that EPA, along with the state of California -- sometimes I call California this "other country somewhere" -- have been responsible in promoting smart, cost-effective regulations that have really stimulated the growth of a number of technologies that not only have improved emissions from vehicles but, at the same time, have, I think, helped, to a large extent, the reliability, durability, and the high-quality of vehicles. And I don't need to tell you those technologies, and anywhere from catalytic converters to more sophisticated fuel systems and microprocessors on the vehicles that we have today.

A recent survey by the world's publications of the engineers in the automotive industry indicate that, for the most part, the industry and the experts within the industry believe that the standards that the federal and state governments have been putting in place to address emissions from vehicles is about right. This chart is really an indication of the success story that I am talking about.

When you take a look at the standards that have been put in place to address emissions from light-duty cars, light-duty trucks including SUVs, heavy-duty diesel and gasoline trucks and buses, we are going to see a significant decrease of NOX emissions across the country. And you can see from 1998 to 2030, when these programs are implemented.

Recently, the Office of Management and Budget published a report that I would strongly encourage you to seek a copy. The report took a look at all the major federal regulations since 1990. And those regulations included regulations from all agencies, from Transportation to Energy to Health to Environment.

And the conclusions were very interesting. But what this report concluded is that 80 percent of the benefits, the social benefits and public health benefits of those major regulatory programs came from programs that the Environmental Protection Agency has managed. And of those 80 percent of the benefits, 70 percent of the public

health and environmental benefits came from four EPA programs: the tier-2 program; the clean fuels program; the 2007 diesel truck program; and the 2007 diesel trucks, buses, and diesel clean fuel program. So that's a huge success story.

These charts show again that the tremendous reduction in NOX emissions as those program, on-road program are implemented. At the same time, this graph clearly shows that as we are reducing emissions from vehicles, like nitrogen oxides, a similar chart really could be put in place for other emissions, like particulates, benzene, volatile organic emissions.

At the same time, you can see that the fuel consumption or use by the transportation sector continues to increase. That's very significant for a number of reasons.

Obviously, we are all concerned about energy security. There is concern about the contribution of greenhouse gases to the change in climate. And the transportation sector does consume in the United States 70 percent of fuel. And actually, on-road vehicles consume about 40 percent.

EPA is responsible every year to publish a report. And we are calling it "The Trans Report", that on an annual basis, reviews of data submitted by all automobile companies and we report out the trends of the fuel efficiency, the trends of technologies that companies are using to improve anywhere from fuel efficiency to power.

And this chart that I would suspect many of you are familiar with clearly indicates that starting around 1988, the combined average fuel efficiency of the fleet has been slightly declining. And again, one of the main reasons for this is because we drive more SUVs in the United States and pick-up trucks. And those vehicles don't have as good fuel efficiencies as cars.

Now, the truth of the matter is, and I was just at the Detroit Automotive Show and I was extraordinarily impressed with all the effort that is going on by the car companies to introduce not only cleaner technologies to improve emissions but also to introduce technologies that improve fuel efficiency. And a number of technologies that are introduced on individual vehicles are anywhere from better tires to more exotic technologies, like hybrids, electric hybrids, to cleaner diesel technologies and fuel cells.

So the good news is that the industries in this country, in Europe, and I was recently in Europe, and I also visited Japan, and I can tell you the excitement of the engineers in the various companies that I met with. And there is a tremendous energy and excitement going on within each of the companies, major companies that we visited, to improve existing internal combustion engines, to introduce hybrid power trains, to introduce clean diesel engines and to work on fuel cells.

We strongly believe that if the public is looking to purchase a vehicle, and we are not experts but we're doing some focus groups and we are following the literature, environment is one of the attributes that they are looking at. A recent poll by the Roper clearly indicated that a number of members of the public, the majority of them will be willing to purchase clear vehicles.

JD Power says that by building it, it doesn't mean that they will come and buy it. And I think they are right. But at the same time, if you are to build an attractive vehicle that also provides a better environmental performance, they will not walk away. They will consider it.

We focused on this recently and what we found out is that there is a minority of the public, a small percentage of the public, that is out there in the marketplace looking to purchase a vehicle just based on environmental performance. Also there is a very small portion of the public that doesn't care about the environmental performance. But the majority, the broad majority of the public, is interested on a number of attributes of the vehicle, including the environmental performance of the vehicle.

We believe that our office is responsible and has been part of the success story. And we have done that by putting forward smart regulations that do not dictate an

approach but rather set technology-neutral standards and allows for the best technology to compete in the market place.

We are also working very hard with a number of partners to develop cleaner and more efficient technologies. And I will spend some time going over that in a second. And then, we are very excited to participate in the efforts that Alan has undertaken in California in the area of fuel cells and the efforts within our own administration to address the potential for fuel cell vehicles.

Let me briefly tell you why we are so proud of the Tier 2 program. Cleaner vehicles and cleaner fuel is introduced in the marketplace this year. As a result of this program, SUVs and cars will have the same environmental standard. Cars and SUVs will be anywhere from 75 to 95 percent more efficient. And when this program is implemented, we're going to see significant public health benefits across the country. Over 4,000 premature deaths will be prevented. Tens of thousands of respiratory illnesses will be prevented. Significant environmental benefits will be achieved by reducing acid rain and improving visibility across the country. But also as important as all those benefits is the fact that this program is cost-effective. When you monetize the environmental and public health benefits with this program, you end up with closer

to \$25 billion of those benefits. And the cost to the two industries that are regulated, the fuel industry and the automobile industry, is about \$5 billion.

The other good news is that what we celebrate on Monday is that the program not only is meeting its first-year requirements. Companies were supposed to introduce only 25 percent of the vehicles, meeting the tier 2 standards. Over 35 percent of new cars and SUVs are meeting the Tier 2 program. That's a huge success story.

And I don't want to say, "I told you so." You know, I remember some of my colleagues here when we started the Tier 2 process, said, "Well, we cannot do it. It's too much. It's too soon." But then, we all worked together to put this program in place, the public health groups, the environmental groups, the states, the fuel industry and the car companies. And indeed, the program is delivering huge environmental benefits.

The second program that I want to briefly go over is our 2007 Diesel Truck and Bus and Clean Diesel Fuel. The concept of this program is a system approach. And that is, if you clean the fuel, reduce sulfur significantly lower levels in diesel fuel, we will be able to enable cleaner, after-treatment technologies to be incorporated in diesel engines.

And we are extraordinarily pleased with the progress that the industries are making in leading this program. The fuel industry is making tremendous efforts in

introducing clean fuel starting the fall of 2006. Actually, our regulations were mandating only 80 percent of the fuel to be 15 parts per million in 2006. Based on the reports that we are seeing from the industry over 95 percent of diesel fuel in the marketplace in June will be 15 parts per million. Actually, we expect the fuel, on an average, to be anywhere from eight parts per million to 10 parts per million.

This program, when it's fully implemented will be able to see tremendous public health benefits. Over 8,000 premature deaths will be prevented. Hundreds of thousands of respiratory illnesses will be prevented. And the program is cost-effective. When you monetize the public health and environmental benefits, the overall dollar amount is about \$70 billion. The cost to the regulated industries is about \$4.3 billion.

You all are aware that in this country, in our country, less than one percent of cars are diesel. And there has been a long history, some of it not a very good history, with diesel cars in the United States. Now you go to Europe and it's a very different situation. Over 40 percent of vehicles in Europe are diesel cars. And diesel engines, I have to admit, they have come a long way because they are quieter; they are more fun to drive. They are more durable. They don't smell, and they don't smoke. It's a tremendous success story.

But in the States, they have another hurdle to meet. And that is, the emission standards at the federal level and the emission standards that CARB has introduced as part of their left to program.

We are very optimistic, based on the work that is going on with our domestic companies, companies in Europe and companies that we have visited in Japan, that with clean fuel in the marketplace in 2006 we are going to be able to see diesel cars introduced in the States meeting what we call the Bin 5, or the average level, of the Tier 2 program.

We have tested a number of vehicles in our laboratory in Ann Arbor, Michigan. And actually, recently, we tested an SUV that meets 50,000 miles at Bin 5. And that is, again, a huge success story.

Why are we interested in clean diesel? As I said earlier, our job is not to dictate a technology, the specific technology. But I think we are very interested to see various technologies compete in the marketplace. And diesel does offer an important role to be played as we are looking at this country in improving fuel efficiency.

In our laboratory in Ann Arbor, Michigan, we have a program that has been put together by a number of engineers and scientists at EPA to attempt to achieve clean NOX emissions from diesel trucks, buses and vehicles without NOX after-treatment

technologies, without urea or noxreducing. The program has been so successful that three major companies -- two diesel engine companies and one car company -- have agreed to work in a cooperative effort with our agency to bring this technology into commerce.

As I was saying earlier, in the back of the envelope calculations, let's assume, just for the sake of assumption, that by 2015 timeframe, or 2010 time frame, one-third of the fleet in the United States would be diesel, the same diesel...I'm told...

Okay. I have to wrap up. And I have to do that. And other way, Alan is going to get upset, and I'm going to take time from his panel.

But very briefly, if one-third of the VMT by 2020 was diesel, we would be able to save one million barrels per day of fuel in this country. This is equivalent of what we were importing from Iraq before the war, and what we are importing today from Saudi Arabia is about 1.5 to 2 million barrels per day.

Very briefly, one of the technologies that we are working is a hybrid but it is not an electric hybrid. It's a hydraulic hybrid. We are using hydraulic as a secondary energy power, instead of batteries. This technology offers significant promise to improve fuel efficiency, anywhere from 35 to 50 percent.

We are working with a number of partners to bring this technology to marketplace. We believe the best place, the best application for this technology will be applications where you have a lot of stop-and-go, like delivery vans.

We have done a study that we are going to publish very soon that evaluates the cost and the payback to the consumers of various technologies, including diesel and hydraulic. And as you can see, hydraulics potentially could be a very important strategy as far as being cost-effective and allows improved fuel efficiency.

Very briefly on fuel cells, there are three areas that the agency is working on. The first area is working the Department of Energy to put together a model that will allow us to do two things. One is to do a life cycle evaluation of all the emissions of vehicles. And the second one is to do a life cycle evaluation of the fuel efficiency or the energy spent by the various technologies.

We also have installed in our facility in Michigan a refueling hydrogen station. And starting this year, we are initiating a partnership with UPS and DaimlerChrysler to have the first commercial vehicle, fuel cell commercial vehicle, in the marketplace. And that will be a UPS Sprinter van delivering mail in the Michigan area with hydrogen fuel power.

Let me finally conclude by saying that we have made tremendous efforts in improving the environmental image of vehicles and fuels. That has been done because of the collaborative effort and the hard work that has taken place not only by the federal government but also by the regulated industries. We have a lot of challenges ahead of us in improving the environmental image of those vehicles and improving the fuel efficiency.

And I strongly believe that working together we can do that. We have absolutely no choice. I think we owe it to our generation, but more important we ought to do this for future generations.

Thank you.