TRANSPORTATION POLICY COMMITTEE WORKSHOP

BEFORE THE

CALIFORNIA ENERGY RESOURCES CONSERVATION

AND DEVELOPMENT COMMISSION

In the Matter of:	)	
	)	
Fuel Efficient Tire Program	)	Docket No.
(AB 844, Statutes of 2003)	)	07-FET-1
	)	
	)	

CALIFORNIA ENERGY COMMISSION

HEARING ROOM A

1516 NINTH STREET

SACRAMENTO, CALIFORNIA

FRIDAY, DECEMBER 7, 2007

10:00 A.M.

ORIGINAL

Reported by:
John Cota
Contract Number: 150-07-001

COMMISSIONERS PRESENT

James D. Boyd, Presiding Member

ADVISORS PRESENT

Susan Brown

Laurie ten Hope

Peter Ward

STAFF PRESENT

Asish Gutam

Caryn Holmes

Tim Olson

Rosella Shapiro

Ray Tuvell

ALSO PRESENT

Marion G. Pottinger, PhD, M'gineering (via telephone)

Robert F. Sawyer, PhD, University of California, Berkeley

Alan Meier, PhD, Lawrence Berkeley National Laboratory

Jim Popio, PhD, Smithers Scientific Services, Inc. (via telephone)

Bruce Lambillotte, Smithers Scientific Services, Inc. (via telephone)

Michael Wischhusen, Michelin North America, Inc.

Tracey Norberg, Rubber Manufacturers Association

Luke Tonachel, National Resources Defense Council

Terry Leveille, California Tire Dealers Association

Donald D. Amos, Continental Tire North America, Inc.

I N D E X

P R O C E E D I N G S

10:09 a.m.

PRESIDING MEMBER BOYD: Good morning, everybody. I'm sorry to be a tad late getting this started. I'm Jim Boyd, Vice Chair of the Commission but Chair of the Transportation Committee, which is why you have me here today.

This is, as you have all seen from the hearing notice, a workshop. I just wish the way this room was set up it was set up in a little more informal, friendly fashion or that we could automatically crank this dais down to the same level as the rest of you. But I invite you to recognize that this is a workshop, it is not a formal business meeting of the Commission, and that we would like to have as much exchange as we possibly can. So this is a Committee Workshop on the Fuel Efficient Tire Program.

The Transportation Committee, which consists of myself and Commissioner Jeff Byron, is overseeing this project and is getting itself more involved in this project now that we have dispensed with so many other incredibly complex and pressing topics of late such as an Alternative Fuels Plan or an Integrated Energy Policy Report

and what have you. So I'm hoping we can get this back on track.

Commissioner Byron was unable at the last minute to be here with us today. He is on business in I believe the Bay Area. With me up here at the dais, however, is his principal advisor, Laurie Ten Hope, who will be sitting in for him. And to my right, Susan Brown, my principal advisor, and Peter Ward, my other advisor. You'll be meeting many of the staff throughout the course of the day.

This is a project that is important to us, contrary to popular belief maybe at this late date and time. It is particularly important because the first report done by this agency pointed out that there was potential here and the Legislature chose to pursue and direct us to pursue this subject even more.

I won't go through all the horror stories of why this might be a little bit behind schedule. The incredible amount of staff turnover we have had here in terms of people who were the project managers. It got so important to us in the immediate past that our Executive Director took personal charge of this project and now he

has left us.

So Mr. Tuvell, who will get the mic here in the moment, has not-too-long ago been given the program manager responsibility for this and all of us are going to be more deeply involved in seeing that this project moves along.

As I started to say, it is particularly important just because this agency with its quest for addressing transportation fuels has pointed out efficiency is one of the strong legs of the stool, alternative fuels, technology, efficiency, land use and transportation, et cetera. We need to address all of those to meet our energy security, energy diversity needs.

But the greatest driver all has become climate change and this issue is a component of the state's climate action team program. We need to move this issue along so it makes its contribution to that effort.

And of course always of concern in this state for decades is the subject of air quality, which has always been the major driver for why we want efficiency, less fossil fuel combustion, et cetera, et cetera. So we have lots of forcing functions that we need to address.

With that I will just say again that this is workshop. We want to see where we are today and then move this issue along. I have been asked questions of late, as I am sure the staff has, is what is our timetable moving forward from this point? And my response to that has been, I think that timetable will be developed immediately upon finishing today's discussion. We need to ascertain where we are, where you all are, where this general subject is in order to determine our timetable for the future.

All I will say is recognizing that we're behind schedule we obviously are putting the staff's feet to the fire and our feet to the fire and want to move this along rapidly, but accurately. Therefore a lot has changed as far as I'm concerned since I last visited this subject some time ago.

I would like to think that the passage of time, which has contributed to the view that perhaps there has been some slippage, has also contributed to moving the ball in this arena way down the field. A lot of events have occurred that may well contribute to our completing this project in a very timely manner and completing it

without maybe stumbling over some of the issues that had been identified in the past as issues.

As I say, the ever-accelerating pace of the world and everything we work on, I think has lined up some issues in a way that will allow us to have a very cooperative, effective relationship with all the stakeholders and all the agencies who are involved in this project.

So enough said. I would like to again thank all of you for being here. I would like to remind you again this is a workshop. Although we are recording it to create a record that we can reference to, and even though I say I'd like this to be informal, coats off, sleeves rolled up -- the room is probably too cold for coats off. Please feel free to ask a question or inject some comment throughout the course of the day.

But recognize you'll have to dash up to the podium where the microphone sits or come to the table even when making presentations and give us your name for the record so the record so reflects and the microphone so the recording will pick up the comments you make.

With that I am going to turn the microphone over to Ray Tuvell who is the staff

member -- who is the project manager for this project now and ask Ray to give his introduction. Frankly, Ray will act as master of ceremonies for the balance of the day.

MR. TUVELL: Thank you, Commissioner Boyd. I have a little bit of housekeeping that we have to deal with, formalities.

For those of you who are not familiar with the building the closest restrooms are located right outside the door over that direction. There is a snack bar on the second floor up here. And lastly, in the event of an emergency and the building is evacuated you can follow the rest of us employees. We'll end up convening across the street over in Roosevelt Park.

PRESIDING MEMBER BOYD: Be grateful it's not raining today.

MR. TUVELL: Grab your jackets and umbrellas if need be and then we'll head over there. We're not expecting any emergencies.

We have a fairly ambitious agenda today and I want to ask for your patience. In some cases we are going to have remote speakers that are not going to be present in the room and so we

may have to deal with some transitional related problems that might take just a few extra minutes and so I appreciate your patience as we move forward.

As Jim indicated we certainly want to welcome questions and comments as we proceed. But I know in some cases there are some people who do have actual presentations that they wanted to make that aren't currently on the agenda. And we simply ask that you fill out the blue cards that were out at the main desk and give that to us and then, of course, we'll certainly provide you the opportunity to make your presentations. Okay?

Let's see here. My intention then is to launch straight into the individual presentations so bear with me here.

Our first presenter is Dr. Marion Pottinger who is the owner of M'gineering. He is in a consulting practice devoted to concepts of machines, mechanics and particular application to tires and tire vehicle systems.

Prior to his formal retirement in 2003 Dr. Pottinger was technical director of Smithers Scientific Services Inc. Marion has worked on numerous diverse projects in both technical and

managerial positions.

Since leaving the Air Force in 1969 he has concentrated in the areas of tire and vehicle mechanics. Dr. Pottinger has worked for Goodrich and Uniroyal. He has published more than 40 papers, acquired five patents, acted as office reporter for over a dozen SAE-J documents, ten in the last three years, contributed to books and given numerous lectures, including the plenary lecture at the Tire Society in 1997.

Dr. Pottinger acquired his MS and PhD degree from Purdue University and BS in mechanical engineering from the University of Cincinnati.

He is President Emeritus of the Tire Society. He has been particularly active in SAE and ASTM, two of the five technical societies of which he is a member. He is also a registered professional engineer and a member of the society Sigma Chi.

Marion currently resides in Akron where he is going to be giving the presentation from today. Are you there, Marion?

DR. POTTINGER: Yes I am. We have the problem again that I do not have the presentation in terms of having control of it. Should I log

off and log on again like we did yesterday?

MR. TUVELL: Hold on, Marion, and bear with us as we try to go through this. Marion, go ahead and give it a try. Use your arrow keys and see if you've got control now.

DR. POTTINGER: No.

MR. TUVELL: Okay. Well what I'm going to do then is I'll go ahead and take control from here and then you can prompt me.

DR. POTTINGER: Okay.

MR. TUVELL: Okay. So we're on the first page, Marion, so go right ahead.

DR. POTTINGER: Okay. I do not see the slides so you'll have to excuse me.

MR. TUVELL: Okay.

DR. POTTINGER: Okay. The National Tire Efficiency Study Report was issued August 4, 2006. That was a year to the day after the project began. Next slide.

MR. TUVELL: Okay.

DR. POTTINGER: Congress gave us the following charge: To evaluate effects of lowering rolling resistance of replacement passenger times. And the idea was to look at the effects on vehicle fuel consumption, tire wear and scrap tire

generation, tire performance characteristics and highway safety, consumer spending on tires and fuel. The funding was through the National Highway Traffic Safety Administration. The Committee's work was restricted to passenger tires, which are used on all but the heaviest light trucks. Next slide.

Basically we're going to talk about fuel energy utilization in driving, tire energy usage, Committee conclusions, Committee recommendations, and then a few personal comments that I'll blame on myself.

In among all of this the authors have interspersed some data, which will indicate why the Committee concluded what it did and recommended what it did. Occasionally if we did insert a personal opinion well will identify it our's and not the Committee's. There is a great deal more information presented in the printed paper than we could cover in this presentation and it has appeared in *Tire Science and Technology*. Next slide.

The first slide, where energy goes, deals with urban driving. And if you look at this chart there's lots of boxes and arrows. But they

are representative of the auguration of a mid-size gasoline-fueled automobile.

The chart is for urban driving. Only 13 percent of the fuel energy value does actual work to move the vehicle forward. And of that 13 percent, in an urban environment, half is lost in repeated stopping. We're going to be looking at what can be done by reducing losses in the rolling part of the equation.

For your interest, hybrids attain their in-town fuel economy advantage by reducing the part of the standby where you're idling in traffic and by reclaiming some of the braking energy dissipation. Next slide.

Turning now to highway driving, the situation is better. About 20 percent of the fuel energy actually ends up doing work to move the vehicle down the highway. Braking and standby or idling are greatly reduced. Thus, down the highway a hybrid doesn't show a large fuel economy advantage beyond that granted by use of a smaller engine. The Committee looked at what can be done by reducing the seven percent lost in rolling. Next slide.

When we characterize tire energy usage

we come up with the rolling resistance force. And this is obtained by dividing the power by the velocity at which you're traveling and it gives an equivalent force.

And the measurements to determine this are primarily made in the United States on 1.7 meter diameter dynamometers. And they use primarily two tests here in this country. The first is SAE J-1269, the second is J-2452, and this depends on the method used for the data.

The rolling resistance coefficient, which is a way to try to get this all down to some single number, depends on inflation pressure and load for operating conditions prevailing in the United States. Velocity isn't important until you exceed allowable highway speeds.

Thus a valid comparison of rolling resistance for different tires can probably be obtained by determining the rolling resistance coefficient as a standardized condition. I would emphasize that it is not for sure that we know how to do this. The rolling resistance coefficient was used in the analysis in back of the Committee's conclusions. Next slide.

Reducing rolling resistance of

replacement tires in the fleet by ten percent is feasible. And this would be true about any great technical stride. If consumers accept that rolling existence is truly important more reduction is reasonably achievable. Next slide.

This can really be done by changing the mix of existing tires purchased. Many replacement tires have low rolling resistance relative to the average of replacement tires. Next slide.

The graph you see shows the rolling resistance coefficient as a function of rim diameter. This is a representation for a significant number of replacement tires, all of a uniform tire quality grading, traction rating of A. The rolling resistance coefficient on the ordinant are for many different tires being sold in United States right now, actually as of two years ago.

In rim diameters, where many sizes are available, it wouldn't be hard to choose tires with ten percent lower rolling resistance without hurting traction because you have the same traction grade, assuming that this is an adequate measure of traction. For large rim diameters, 18 inches and above, these are new on the market and

relatively rare at this time. Next slide.

Migration of OE technologies could help. Now this is where silica and xylene have usually been found to date, although other technologies are involved. OE tires typically have lower road resistance by 10 to 25 percent across all classes of tires. Next slide.

We added some bands to that graph we saw just a moment ago. And if you look at these bands you see the performance tires, H rated and above, have about the same band as light truck, P-metric tires in terms of OE tires.

Finally, except for Z, W and so-forth tires, that arrow going up on the right size of the graph, which are quite rare, proper OE technology could be applied to result in a substantial reduction in rolling resistance. Next slide.

If we all watched our inflation pressure we could reduce our operating rolling resistance by an average of about five percent right now. Now this can be difficult because there is a temperature interaction. And as I pointed out to the fellows the other day, I did my tires last week when it was 60 here and it's 20 here right

now so that makes a big difference. But it is a cheap way to reduce rolling resistance, it's immediate, but as drivers we're often careless.

I'm going to tell you a small but quick story. One of the technical directors of one of the tire companies bought a new car in 2006. He'd had it about three months when he noticed a light come on on the dash. He didn't realize he had a tire pressure monitoring system to that point. So you can think about that.

In our opinion, the right tire choices and good inflation maintenance should really produce 15 percent or more reduction. Good inflation maintenance is good just generally. It increases wear life, improves handling and reduces the already slim chance of a tire failure, besides reducing fuel usage. Next slide.

A ten percent reduction in rolling resistance will improve fuel economy by one to two percent. Next slide.

To check this we went to a base rolling resistance coefficient tire that was .008. This is good. It's a good tire in terms of rolling resistance. And we asked General Motors, that's GM, the National Energy Technology Laboratory,

Professor Mark Ross at the University of Michigan and Environmental Energy Analysis Incorporated to model what would happen for reducing the rolling resistance coefficient by ten percent and then for increasing it by about ten percent. And all of them happened to agree that ten percent would be one to two percent of the fuel used. Next slide.

Eighty percent of passenger vehicles now have replacement tires. A one percent improvement in fuel economy in these vehicles would save about a billion gallons, that's about almost 24 million barrels of fuel annually. And the ten percent would be like the effect of cutting the number of cars and light trucks on the road by about two to four million vehicles. Fundamentally what this all says is one to two percent of big numbers matter on a national scale. Or you might say, a California scale. Next slide.

You all recognize that reducing tire mass is and the compounds throughout the tires will reduce rolling resistance. But changing the carcass, which is the structural part of the tire, is more complicated than changing the tread. Since about half the tire's rolling resistance is tread related the Committee viewed the first order

of changes as tread-related.

The details of the tread compound and how much of it are present affect rolling resistance. Less wear reduces rolling resistance over a tire's life by an average of about 20 percent. It is promising as all of you also know to improve compounds reduces resistance. Many details of compound improvement technology are held proprietary by different tire companies. And of course not all of these technologies are silica and xylene-based.

Building tires to a smaller tread mass will reduce rolling resistance but not by much over the tire's life unless drastic changes are made such as half tread depth tires with multiple retread. Thus we concluded that simply reducing tread depth enough to look good in a new tire rolling resistance measurement is a bad idea.

But suppose you did it in our current, industrial model. This would lead to the fact that every one percent reduction in tread life would add about $1.20 in tire cost per year for tire purchasers like you and me. The amount of scrap tires would climb. Next slide.

Traction is changed every day to some

extent every day for reasons of noise mitigation, appearance, handling, ride comfort and on and on, not just rolling resistance. And the Committee really had no way to identify the small changes in traction and their relationship to safety. Indeed there may not be any relationship for small changes to traction.

We looked at the uniform tire quality grading traction to see if it was feasible to reduce rolling resistance while maintaining traction. Again, we're assuming that this is an adequate measure although it's a very simplified test and deals with only one condition. Next slide.

Here you have the rolling resistance coefficient for a number of tires at each of the traction grades. Tires graded A or AA reveal an ample amount of choice of rolling resistance without changing traction level. As a customer we have a choice if we have data. The B level, which contains relatively few tires, harbors tires which are lowest in rolling resistance. Next slide.

Reducing the average rolling resistance for replacement tires does promise net savings to customers. A one to two percent savings in fuel

would be $18 to $36 per year in average fuel savings, $3 to $6 billion annually. And the numbers were based on $3 a gallon fuel. And when I did this there were people who disagreed with me it would be $3 a gallon but that happened to be what I saw on the pump August 4 of 2006 here in Akron. I said well, it is not going to get better than this in the long run.

Now new technologies might add $1 to $2 to the price of a tire, increasing consumer tire spending by $1 to $2 per year.

The important thing is not to shorten wear life in our current business model due to a choice of rolling resistance technology reduction. Fundamentally if you think about it, the model we use is we buy a tire, we use the tire, we dispose of the tire. Trying to save fuel by reducing wear life is not a good idea. We actually went through a modeling process for this. Next slide.

Relative to wear. This part of the rolling resistance coefficient versus uniform tire quality tire grading tire wear grade looks like a buckshot pattern on a wall. But it makes a point that you could choose rolling resistance and you don't have to necessarily choose poor wear life.

For example, let's just going in there and say we're going to choose .009. You can see, I can choose tires with grades from about 100 to almost 800. A high wear grade can be associated with good rolling resistance. Next slide.

We recommended that Congress should authorize and provide resources to NHTSA to gather and report information on the influence of passenger tires on tire fuel economy.

We recommended that the information should be widely available and easy to understand. And it needs to cover essentially the waterfront in terms of tire size, models and types. This is a complication because there are about 40,000 or more stock keeping units for tires in this country. Next slide.

We felt that there should be consultation with the EPA on ways to convey the information to customers.

That we needed to seek the participation of the entire industry.

And the whole thing needs to be periodically reviewed because if it really is doing no good then why do it.

And we should accompany this with

efforts to promote tire inflation maintenance. Next slide.

Now here is the $64 question. Will consumers respond? Right now we can't respond because there is no rolling resistance information available to us as customers. And now will people respond if they have information? The Committee doesn't really know. But we hope that it would spur consumer interest once consumers realize the high rolling resistance is like a tax. They pay for nothing of value in order to drive.

Now this is an author's personal comment: If you want to promote something don't do it with dusty, bookish pamphlets and stickers. Give the information to consumers with the push of a good Budweiser ad. Pick the right spokesman. You have to have life and you have to have pizazz. Next slide.

Do you have any questions and do I have any time to answer questions?

MR. TUVELL: We have time for you to answer questions, Marion, and we certainly want to invite questions.

PRESIDING MEMBER BOYD: Thank you, Dr. Pottinger. How about you folks out there, you

have some questions? Bob.

DR. SAWYER: Bob Sawyer, the University of California at Berkeley. Would you comment on the adequacy of the roller dynamometer test versus flat road. Are there differences there and should we worry about them?

DR. POTTINGER: There are indeed differences. At the present time there is no adequate flat surface commercial rolling resistance machine. The flat track machine has been built for general purposes and not aimed at the very low level forces involved with rolling resistance. So you would be in a machine development project. Also these machines are much more complex to maintain and are relatively expensive.

PRESIDING MEMBER BOYD: Thank you. Any other questions? Bob, another one?

DR. SAWYER: I don't want to dominate this. Another question. I know that road surface condition is not really part of the tire's responsibility but could you say something about how that plays into the rolling resistance of the tires.

DR. POTTINGER: Yes, this was one of the

things that we on the Committee considered. If you get a hold of TRV-286 you will see as part our references the information we could find. The rougher the road surface in terms of pebbly-type texture the higher will be the rolling resistance of the tire.

If the road surface has appreciable ride roughness characteristics then you're going to have energy losses that really migrate to the shock absorbers or dampers on the vehicle. That's about what I can say in short. But get a hold of the report and the references are in there.

PRESIDING MEMBER BOYD: Another question.

DR. MEIER: This is Alan Meier. Thank you for that excellent presentation. You didn't talk about original equipment tires. As a point of reference can you say what the typical rolling resistances are on tires that are supplied with new cars.

DR. POTTINGER: Okay. If you go back to the presentation. Excuse me just a moment. I'm going to look back because there's one of the slides and you may have missed something I said about it so give me just a moment, please.

It would be slide number 11, rolling resistance coefficients for A traction rated tires. There's some horizontal colored bands on there. There's a yellow band, a blue band and then a sort of a striped band overlaid there. And those bands, the blue band is for light truck P-metric tires at the OE. These are all OE targets that are shown. Touring tires are the ones with the band, with the sort of hash band, and then the yellow is for all-season tires.

And one thing that people should give some thought to is what is the rolling resistance relative to heavy duty truck tires. In that case heavy duty truck tires would ride terribly because they have very high inflation pressure. And the thing also that's true is the traction behavior of heavy duty truck tires is not nearly so good as passenger tires. But that's sort of the limit towards which you could push things I think. Does that help?

PRESIDING MEMBER BOYD: Thank you again. Any other questions?

It looks like there are no other questions in the audience. Thank you, Doctor.

DR. POTTINGER: You're welcome.

PRESIDING MEMBER BOYD: We welcome you to stay tuned in and chime in anytime.

DR. POTTINGER: I will for awhile. Late this afternoon eastern standard I'll have to get off because I have a call to Indonesia to make.

PRESIDING MEMBER BOYD: All right, we welcome you to stay as long as possible.

DR. POTTINGER: Okay.

MR. TUVELL: Very good. Our next speaker is Dr. Alan Meier. Dr. Meier is a senior scientist at Lawrence Berkeley National Laboratory in California and is a faculty researcher at the Institute of Transportation Studies at UC Davis.

His early training was in chemistry and economics with a PhD in energy and resources from the University of California at Berkeley. He published several papers on the use of small vehicles in Southeast Asia cities and in Turkey and Crete in the late '70s.

Since then most of his research has dealt with understanding how energy is used and how it is used more efficiently. His work relies heavily on field measurements of energy use in buildings and equipment.

About a decade ago he began to study

energy consumption in miscellaneous equipment and more recently the energy use of appliances when they are switched off. This research sparked his interest in standby power and launched an unusually successful global effort to reduce standby power in all sorts of equipment.

He has also created the first real-time web-based display of supply and demand for electric power in California.

He recently completed a four year stint with the international energy agency in Paris where he began examining the miscellaneous energy use in motor vehicles, often called the auxiliary or off-test energy, and ways in which it could be reduced. He organized three institutional workshops on tires and other off-test components and improving the fuel economic of heavy duty vehicles.

Alan has published over 100 papers and articles in journals, magazines and conference proceedings, mostly about energy efficiency. He also founded the magazine *Home Energy* and served as editor in chief of *Energy and Buildings*.

Dr. Meier.

DR. MEIER: Thank you very much. It's a

little bit awkward sometimes to present the results of a whole workshop but I'll try to make it as colorful as possible. And worse, I have to be honest because Commissioner Boyd was present and he can contradict me if I exaggerate or --

PRESIDING MEMBER BOYD: I have no memory anymore.

DR. MEIER: All right. So why did we have this workshop on tires? In fact, I will go backwards and say, notice one of the big problems that we had, but also indicating the international aspect of this conference is we could never agree on how to spell tires. This was one thing that came up time and time again. So the title had a *Y*, but as you can see I will quickly switch to our more familiar and American *I*.

So the group of seven and sometimes eight of the richest countries in the world get together every year. The presidents and prime ministers and whatever leaders they are discuss big, global issues and one of them has been, of course, the environment, global climate change and energy consumption.

They have become rather interested in energy efficiency lately and they tasked the

International Energy Agency to find and make recommendations to them of where they could work together to reduce energy consumption. This is actually a great opportunity because basically we got to look around at almost anything we wanted to and give them some concrete recommendations.

Which you will find rather odd at some times because you see these large descriptions, global prescriptions about energy use and so on, nuclear power and disarmament, and suddenly things like set-top boxes pop up in the recommendations for energy savings and energy efficient tires.

They told us in the area of transportation to find areas that would benefit from international collaboration. And that's actually both easier and more difficult because so much of transportation is internationally standardized but there may still be some areas where some collaboration of energy savings might occur.

Through kind of a process of elimination we came up with the area of off-test fuel consumption and trying to figure out how to deal with the 20 percent or so of fuel consumption. On-road fuel consumption is not captured in the

fuel economy tests. And one of the --

And as a result of that we had a series of workshops, actually four workshops. The first one was on tires, the second one is on air conditioning, the third was on trucks and just recently there was one on eco-driving. That is, giving people, the drivers, better feedback on how to drive more efficiently. I am going to talk about tires.

So November of 205 we had the first conference workshop. We were I think a little bit more fortunate. We had a very large, round table. When you have an international workshop or an international meeting at the IEA there's only one big conference room and every country is equal and every participant is equal so it's a very large, round oval but you need binoculars to see the people on the opposite side of the table.

Fortunately it was just the right amount. Everybody was at the table. We had manufactures of tires. We had some of the related industries such as Rhodia who provide some of the additives to the rubber, Schrader Tire Systems for tire pressure monitoring, and other, we had some other manufacturers. We had governments present

from the European Union, from the United States Department of Energy. Nobody from EPA I might add or NHTSA. We had two people from the California Energy Commission, France, Germany and so on. We also had lots of NGOs, universities and consultants.

Well, I'm going to try to summarize some of the things that happened in the workshop. To many of the people there the most remarkable thing is there were data. The whole discussion about tire rolling resistance in the past has been the absence of large amounts of rolling resistance data.

And for reasons which I can't fully explain manufacturers, NGOs, governments all suddenly came up with data. And so we had more data presented I think at this workshop than had ever been presented before. So that actually focused the discussions a lot more on well, what kinds of differences were there between tires and could you achieve different reductions in rolling resistance without sacrificing some of the other features.

One of the other ideas that emerged and was obvious to some people, of course, was how

different the tire markets were in two or three respects. One was between original equipment and replacement tires, and of course between the United States and Europe. How the cars in Europe had different rolling resistance. The new cars had different rolling resistances.

But also you could see the trends that all the European manufacturers were moving towards the American system of outfitting their cars with very low rolling resistance tires. But at the same time they acknowledged that there was a lot of what I call wiggle-room or opportunities for the automobile manufacturers to kind of circumvent the regulations because you only need a certain fraction of the cars to have a low rolling resistance tire to qualify for the entire fleet average.

One of the other things that became evident is that certainly some of the manufacturers and the NGOs were thinking about how do you label energy efficient tires. A few schemes were proposed and I am going to show you an example in a moment.

One of the things that came out clearly though is the manufacturers had already learned a

lesson that they couldn't make their own label. That selling low rolling resistance or energy efficient tires on their own just didn't work. They needed to have a standardized label across all manufacturers because consumers were skeptical of the claims otherwise.

One of the things that we found certainly important in its absence was the fact that we could not get any independent data on the costs of achieving further reductions in rolling resistance. So everybody was confronted with the fact that they could only look at the tires that were on the market and could not go the next step and say, well what happens if you do invest another dollar. How much rolling resistance reductions will you achieve and where is the cost-effective minimum. And that's a problem that I think we still face.

Just to summarize some of the data that we saw. Here in very gross terms you can see that the rolling resistance of some tires in passenger cars ranged in kilograms per ton from 14 down to 7, so that is an enormous range. It's equally almost as large for trucks. The important number in Europe was that the typical rolling resistance

for tires was about 12 on average today. So there was, as indicated in the previous presentation, great potentials for reductions.

MS. SHAPIRO: You know what, I have an important question.

DR. MEIER: You better go to the --

PRESIDING MEMBER BOYD: Come on Rosella, follow the rules.

PRESIDING MEMBER BOYD: The staff certainly needs to follow the rules.

MS. SHAPIRO: Rosella Shapiro, Fuels and Transportation Division. Does your matrix show that new car OE equipment versus replacement has that great disparity or is that just the range? I don't understand what that chart is telling me.

DR. MEIER: That was the range. And notice also that it was in Europe, it was a European survey. But it was the range of all tires.

MS. SHAPIRO: All tires.

DR. MEIER: Yes.

MS. SHAPIRO: Mixed. No distinction between OE and replacements.

DR. MEIER: There was no distinction, yes.

MS. SHAPIRO: Thanks.

DR. MEIER: I wanted to show an example of a labeling scheme that one of the manufacturers had proposed. This may be a little bit difficult for you to understand because they're using a -- there are two assumptions behind it.

First let me explain what the axes are. The horizontal axis is tire diameter in millimeters and then you can see rolling resistance on the vertical axis.

The Europeans have used, have started a whole series of energy labels which are categories, usually A through F, and it's kind of a rainbow sort of colors where A is green and F is red, I believe. I didn't bring an example of that but later if you want to I can pull it off my computer.

So this manufacturer was trying to figure out how to convert, to impose that kind of A through F category scheme on the universe of tires. The LET stands for low energy tire. And you can see from the axis and from the legend he has a LET1 and LET2 and then he goes to ULET, which is an ultra-low energy tire 1 and 2.

And then he goes to an SULET, which is a

super low-energy tire, which allows him to make these categories of about A through F I believe. Then you can also see that there is an area shown of the standard tires today, which I think he's trying to get at somewhere around C.

Several of these kinds of proposals, these ideas, were tossed around. We weren't there to come to any consensus or resolutions. That's not what the workshop was for. The idea was really to just get some sense of what information was available, what is the technical potential and is this an area for international collaboration. So here I am trying to summarize the sense of the group rather than just, rather than trying to find someplace where there was a unanimous vote. There were no votes. There clearly were no consensuses, if that's the right word.

So one point that came out fairly clear is that there were still, of course, some uncertainties about the differences in test procedures. But everybody felt that, you know, the differences in the test procedures, especially between Europe and the United States, were relatively small and it would not be that difficult with a little bit of perhaps push from

the international agencies and authorities and the governments to get a harmonized test method. So that's where I say a harmonized test method for rolling resistance was within grasp. It wasn't there but, you know, with a little bit of a shove from higher up people might be able to get that to happen. And clearly the manufacturers would appreciate that.

Some but not all of the tire manufacturers supported establishing mandatory efficiency levels. There were both public and private opinions expressed so you could get some sense that there was not unanimity and we were still, the public statements and positions of some of the manufacturers associations may not reflect their actual opinions.

Everybody agreed, of course, that we shouldn't force the manufacturers to offer tires that have lower performance in other characteristics in order to achieve lower rolling resistance.

And as indicated earlier, everybody was reasonably confident that even with today's tires you could pay back the incremental cost of low rolling resistance tires in fuel savings, in part

because there wasn't a clear incremental cost for those low rolling resistance tires. So obviously they're going to pay back. But people were sort of thinking about, well what happens in the next step if there was any kinds of constraints.

And throughout the whole workshop you could get this feeling that there was nobody in charge of this problem and that responsibilities for fuel efficient tires was just dispersed over so many agencies it was very difficult to deal with the fact that we had -- Some people had to think about maintaining the adequate pressures, who is responsible for that.

We had safety and then we had fuel economy. And you could see that several different departments, ministries, agencies, whatever, all had some sort of role but it was very difficult to find anybody who was in charge. And certainly in the case of fuel economy seemed to suffer.

One example of that was just how do you label a tire for its rolling resistance? There is already a kind of label fatigue. There is so much labeling information on a tire already. Is it going to be a new label that competes with the existing labels on durability and so on or is it

going to be somehow integrated. And these were the kinds of problems that you have to face when you think of just having a label as your way of informing people.

Well, you know, a workshop really doesn't try to produce something but it's nice to try to trace some of the impacts of the workshop. In this case there were a couple of cases where we saw some impact. I know for a fact that the European Union wrote this sentence as a result of this workshop. The sentence was:

> "The Commission will issue a mandate for a recognised European Norm and possible international standard for maximum rolling resistance limits and labelling for road vehicle tyres --"

So they're saying they're going to try to push to get this test procedure finalized and then once that's done they're going to start a minimum, some sort of standard for rolling resistance.

Of course it is very much tied into the politics of fuel economy standards in Europe, which is politically very sensitive and has Germany practically at war with France again. The

European manufacturers have presented information, which I confess I haven't followed this closely enough but I was a little bit surprised. It seems to be evolving in a way.

At one point they said they supported fuel economy standards, efficiency standards for tires. But now they say, yes we support it, and they have nuanced that with yes, we want to package that with various procedures and programs to monitor tire pressure.

Finally, there was one representative from the National Academy Study at our workshop. I believe the National Academy Study cites our workshop but we are not exactly sure to what extent they relied on the results but certainly there was some sort of connection between the two.

So with that I think I've summarized what happened at this workshop. It is almost ancient history except there's also a lot of deja vu here. We see that many of these concepts have not really been resolved yet. Thank you very much.

PRESIDING MEMBER BOYD: Thank you, Alan, good to see you again. Now I'll entertain some questions. There's one up here. Susan.

ADVISOR BROWN: Doctor Meier, what recommendations would you have for this Commission moving forward on tire efficiency given what you learned at the International Energy Agency workshop?

DR. MEIER: That's a very good question. I think I have three. One is, we've got to collect data, that's the first one. We need to know what the existing situation is.

The second is we need to improve the test procedure. Ideally if we could come up with a test procedure that is harmonized globally, that way we can use information results from other countries to help inform our own decisions, our own standards and analyses.

And eventually I think we need to have the research to be able to say, well how much further can we go in the area of improving, reducing rolling resistance and how much does it cost. There is very little public information in that area.

ADVISOR BROWN: Can you also expand further on your experience with the labeling examples that you saw in Europe. I heard you mention France again at war with Germany, and I

knew there were some proposals in Germany at least to label tires.

DR. MEIER: Yes, there are. I believe now there are some labels for tires, although it's more in a green sense, in a broader sense. I am skeptical of labels and their effectiveness for consumers, changing consumers' behavior. They may change manufacturers behavior, that they don't want to display a label that shows their tire having the highest rolling resistance, and so they may seek to eliminate that tire or that model. And that's good. But I think we should not rely entirely on labels to move the market.

ADVISOR BROWN: Thank you.

PRESIDING MEMBER BOYD: Alan, you brought up the issue of test procedures or test protocols. What is your view on the ability to have agreement internationally on a test protocol. For instance, we have an SAE test protocol. I hear a lot of agreement on that protocol. What is your view with regard to it. And I think this is a question probably addressed to international or foreign tire manufacturers later today. But what is your view of the likelihood or the speed with which we could get resolution of an international

test protocol? And would the Europeans accept an American-derived test protocol if there was unanimous agreement over here?

DR. MEIER: I'd like to partly dodge that question because I think there are some people here who know a lot more about than I do. But I do believe that maybe on the short term you won't be able to get any agreement because these test procedures are something that progress at a glacial pace. I guess I shouldn't use the word glacial pace anymore.

PRESIDING MEMBER BOYD: I still refer to glacial alacrity as a favorite expression.

DR. MEIER: Anyway, but that doesn't prevent various institutions from announcing that they will in the future work towards an internationally harmonized approach. And therefore even if initially one test procedure is adopted they can in the meantime be working towards an international harmonized test procedure.

PRESIDING MEMBER BOYD: I think we're about to get a comment on that.

DR. MEIER: Yes, this is Tracey Norberg from the Rubber Manufacturers Association. I had

planned to address this during my remarks earlier, I mean later this morning, but since the topic has come up maybe I can clarify now.

The SAE test method that I think you heard Marion referring to earlier and there's some other mention of is the established test method in the United States. There is a single point variation which the CEC testing was based upon.

However, the global tire industry is currently working on an international test method through ISO. It's ongoing and it is -- I mean it's globally supported by the industry. And actually it's being led by the United States. So, you know, just to kind of clear up any misunderstandings about that I would say there is not any lack of consensus in terms of moving that issue forward within the global tire industry.

PRESIDING MEMBER BOYD: So there is an effort underway.

MS. NORBERG: Absolutely.

PRESIDING MEMBER BOYD: Is it glacial in nature or do you have hope?

MS. NORBERG: You know, maybe we can skip this in my slides so we don't waste time coming up. But basically what the deal is that,

you know, it's an ISO process. They have established mechanisms for moving forward. At the earliest we're expecting early 2009 they'll have a final standard.

But I think the important point to really hit home is that it is not better or worse or anything than the current SAE test method, it's just different. And when I mean different I mean different speed, different load and different surface on the test wheel. And so does it yield better results? No, it's different results. And the idea is that when people are testing tires you want to have results that all can be compared.

So I think it's an important distinction to say it's not, it's not an improvement one way or the other over existing test methods, it just would be one that everyone in the world could use. And by that same token it is important to also understand that data that is gathered by the SAE test method can be easily correlated to data from an ISO test method. And a migration from one test method to the other shouldn't be difficult, it shouldn't be controversial and it should be fairly seamless. So even though the ISO test method is down the road a little bit it shouldn't in any way

hold up this process. And we, you know, pledge to work with the Commission when the national test method is available.

PRESIDING MEMBER BOYD: Thank you. Now that we essentially broached the subject I'll keep you hanging here a minute longer. Is it your view, and maybe we can defer this to when you do testify or you do your presentation. But I would like to leave the question on the table if you don't want to answer it now.

Is it your view that the test method that will come from this process will truly be -- well you said it will be internationally accepted. But will it really be the best possible test method? The one that gives us the most understandable, acceptable data on this subject.

What I have in mind, unfortunately, as an analogy is the EPA fuel economy data. Many of us for years knew that the public was not being given a really good view of the performance of vehicles. and finally after decades just recently the EPA, you know, the test procedure has been modified and the public now gets new data. Will we leap over that kind of a dilemma to what is probably the --

MS. NORBERG: What I'd suggest, I'll give you an answer and then if any members of our association have any additional comments that I may have missed I'll ask them to leap forward and add to what I say.

But basically it's important to keep in mind what the international test method and the SAE test method are both designed to do. They're designed for regulatory development and compliance purposes so that we can compare tires. They're not designed so that we can assess how every tire will perform on every vehicle.

And the challenge with the EPA method that you're speaking of is really, are you showing what real world a car is doing on the road and that's where the challenge has been in terms of the, you know, EPA test methods versus the window stickers.

But here we're talking about something different. We're trying to say, you know, we have a group of ten tires and we'd like to rank order those tires and understand how they perform relative to one another. And so from that perspective this test will do that. The SAE test will also do that. So it's important to

understand, is this the test that will tell us everything about how a tire performs in every situation? No, but it is a test that will allow us to rank tires, give consumers information and make regulatory decisions. So from that perspective it accomplishes that goal and we fell that it would do that well. But also the SAE test does. And I don't know if you all --

PRESIDING MEMBER BOYD: Thank you.

DR. MEIER: I would add that any energy test procedure is a compromise between making sure that it does reflect, that what you measure in the laboratory, that if A is better than B in the laboratory there is also going to be that A is going to be better in the field and the same ranking will occur. As much as possible you're going to also be able to say, if you measure the rolling resistance in the laboratory you can correlate it to what it is in the field.

But it is a compromise. If you want to invest a lot more in having an expensive kind of test procedure then you may be able to get better accuracy maybe in the field prediction or something like that. But I don't think this is really a problem. I think what you're seeing is

we're strongly agreeing with each other.

MS. NORBERG: And I would say the process is well underway. I don't think any push from anyone else will move it faster. From what I've learned ISO sort of has a prescribed speed at which it proceeds. But it is well underway and it is being, it is being headed by US industry.

DR. MEIER: I'm not sure I agree with that last statement, that ISO, that you cannot influence the speed at which it moves. Because each of the countries has kind of a veto power or something like that. But maybe we can have another speaker address that.

MR. WISCHHUSEN: Excuse me, Mike Wischhusen from Michelin. This is a subject very near and dear to my heart because the international effort is being led by a member of my staff so I know the subject quite well.

ISO has a standard time line and an accelerated time line. The rolling resistance standard is working on the accelerated time frame. And just coincidentally the international group is meeting next week in Washington DC. So this is a very high profile effort, a very high effort project and it is going on an accelerated time

line. Thank you.

PRESIDING MEMBER BOYD: Thank you very much. Any other questions or comments for Dr. Meier? I guess not.

Alan, thank you very much.

MR. TUVELL: Bear with me here as we go through the transitional. As it turns out, our next speaker will be focusing in on the testing procedures. Okay.

Our next speaker is Dr. Jim Popio. Jim is the director of engineering services of the Smithers Scientific Services and Ravenna Laboratory in Ravenna, Ohio. Jim has over 15 years of engineering and technical experience in material behavior.

Jim received his PhD in engineering from the University of Akron, majoring in material behavior and thermodynamics. He also received his BS and MS in mechanical engineering from the University of Akron.

Jim, I hope you're there and you heard the previous discussion on the tire testing procedures so it's a good lead-in for you.

DR. POPIO: Yes. Can you all hear me okay?

PRESIDING MEMBER BOYD: Yes, very well.

DR. POPIO: Okay, good. Tracey and everybody kind of set me up here to give you an overview of the SAE rolling resistance task group. If we go to the -- I think we have control of the slides here maybe?

MR. TUVELL: Yes, give it a try. And if not we'll do it from here.

DR. POPIO: If we just go to the next slide that's fine.

MR. TUVELL: Okay. Hold on a second then while I resume control. Okay.

DR. POPIO: Back in April of 2006 Drs. Pottinger and Luchini presented a paper where they were comparing, I think it was kind of a fallout of that presentation that you got earlier. They were comparing issues between a few SAE recommended practices.

And the information that was shown was interesting enough to the SAE Highway Tire Forum Committee, HTFC, to create a task group to analyze or investigate some of the technical concerns.

The group consists of myself, the Chairperson, 23 participating task group members, I think you might have a few out there, and 19

organizations represented from independent testing laboratories to automotive manufacturers, tier one producers, so on and so forth.

The charter of our task group was to investigate the fidelity and application of SAE J1269, and I'll give you a little more information on that in a moment, and SA J2452. We're looking at any issues or discrepancies between the two standards, investigating the single-point testing, which is included in J1269. We're looking at any potential technical issues there may be with that.

Identify and form task groups as required then propose any updates or revisions to the standards. We have an annual or every so many years the standards are reviewed and re-approved or edited, modified, depending on what needs to be done. If we could go to the next slide.

SAE J1269. And this is information right out of the foreword and scope of the procedure or practice. It provides a method for determining rolling resistance of passenger car, light truck and highway truck and bus tires under controlled conditions.

The procedure is intended to provide a way of gathering data on a uniform basis to be

used for various purposes. And I think Tracey kind of eluded to these as well. For example, tire comparisons, determination of load or pressure effects, correlation with test results from fuel consumption tests, et cetera.

Again, this practice, J1269, it's applied to passenger car tires, light truck tires, highway truck and bus. It is a steady state-type procedure. It has constant velocity but it has varying loads and inflation pressures.

And the last slide is SAE J2452. This is a little bit different. It's a recommended practice that establishes a laboratory method for determination of tire rolling resistance of passenger car and light truck tires. It does not include the truck and bus tires.

It provides a standard for collection and analysis of rolling resistance data with respect to vertical load, inflation pressure and now velocity, where J1269 did not have a velocity component.

The intention is to estimate tire rolling resistance contribution to vehicle force applicable to SAE vehicle coastdown recommended practices J2263 and J2264. It is typically used

by the vehicle producers to help with their CAFE modeling.

The scope. This is recommended practice again. It applies to passenger car or P type tires, light truck metric, light truck high flotation tires or similar tires approved by bodies other than the Tire and Rim Association.

The methodology is applicable within normal operating ranges of vertical load, inflation pressure and for velocities between 71 miles per hour and 9 miles per hour. In other words, we do a coastdown-type test on the tire to get the effects of velocity.

This procedure is applicable only to operation in the free-rolling mode at zero slip and camber angle for ambient temperatures between 20°C and 28°C. And it is typically run on 1.2 meter and above diameter road wheels or drums, depending on how you'd like to refer to it.

And that's kind of an overview of the SAE Rolling Resistance Task Force. Again, it's part of a greater, a larger organization, the Highway Tire Forum Committee. And we are tasked with updating and/or working on these standards or practices. Are there any questions?

PRESIDING MEMBER BOYD: Thank you. Yes, here comes a question.

MR. TONACHEL: This is Luke Tonachel with the National Resources Defense Council. Dr. Popio, I just wondered if you could go back to to your slide on J1269. You had mentioned a correlation with test results from fuel consumption tests. Could you expand on that a little bit.

DR. POPIO: Well oftentimes though -- I mean, what's that alluding to and when the task groups originally developed these they were explaining how it was used. I mean, this is a recommended practice on how to measure a tire. How folks use the data is not specified. The developers in the beginning, it is my understanding that they were using this data along with findings from say a fuel economy test or whatever to do some correlations.

MR. TONACHEL: Okay, thank you.

ADVISOR BROWN: Dr. Popio, this is Susan Brown. Could you explain how these two tests are used. Are they used in combination to verify results? Both of them get at rolling resistance.

DR. POPIO: Right.

ADVISOR BROWN: I'm just trying to understand better. Are they options or are they used one to verify the other or how?

DR. POPIO: They kind of are -- You'll get it from a benchmarking or a tire comparison point of view, SAE J1269 seems to be the method of choice. In other words, it is used to compare tires.

J2452 can do the same but it has a vehicle component and it is used more, it was developed actually as an initiative by the vehicle manufacturers so it is more vehicle-centric. So they both will give you values but it's kind of like Tracey said earlier, you get different results. For 2452 you have a matrix of loads and pressures and speeds, and with J1269 it's a steady, it's one speed, it's 50 miles per hour and it has a matrix of load and pressures. So the speed effect is kind of ignored in that one and used in the other one. Does that help at all?

ADVISOR BROWN: Yes, thank you. This is a little bit like, everything you wanted to know about tire testing but were afraid to ask.

DR. POPIO: Right, exactly.

MR. TUVELL: May I ask a question also?

Jim, this is Ray Tuvell. Is there perceived any major shortcomings with 1269 at the present time?

DR. POPIO: There are no perceived shortcomings at the time. There are -- I mean, we're obviously looking at it from the technical perspective, making sure there are no holes in it right now. With all the extra focus I guess on the test methods. But right now I don't see any major shortcomings. I mean, there's minor details or inconsistencies between 2452 and 1269 but as a whole it seems to be an effective method to evaluate tires.

MR. TUVELL: And once one other question. Historically how long has this procedure been out and in use in the industry? Do you happen to know?

DR. POPIO: I can't remember the original date. Was it the '70s? I probably have a copy of it here.

MR. TUVELL: Yes, just approximate is fine.

DR. POPIO: It's been around for a number of years. If I can find it. I'm not sure of the exact date but I know it's before -- it's before my time in this industry for sure.

MR. TUVELL: Okay, that's fine.

MR. AMOS: Thirty years.

MR. TUVELL: Thirty years, Don Amos tells us.

DR. POPIO: Okay. That seems about right.

MR. TUVELL: Any other questions? All right. Okay, thank you, Jim.

DR. POPIO: Thank you.

MR. TUVELL: Hold on a second for the transition again. Okay.

And Bruce, are you there?

MR. LAMBILLOTTE: I'm here Ray.

MR. TUVELL: All right.

MR. LAMBILLOTTE: I'm not sure if we're controlling it. If we do we'll have it into --

MR. TUVELL: Okay. I think we're having the same problem that we did the other day during the dry run so let me go ahead and set up to run it from here.

MR. LAMBILLOTTE: That's fine.

MR. TUVELL: Okay, we're ready here, Bruce. Hold on a second while I do the introduction.

Bruce Lambillotte is the General Manager

of the Smithers Scientific Services Akron Laboratory in Akron, Ohio. Bruce has over 34 years of technical experience in the tire industry. He has made numerous presentations as well as published a number of technical articles on a variety of subjects pertaining to tires.

Bruce has a BS degree in chemical engineering, and a master's in business administration from the University of Akron. It's all yours, Bruce.

MR. LAMBILLOTTE: Ray, we're here to talk this afternoon about the Task 4 Rolling Resistance Program. Task 4 refers to the main body of the rolling resistance work that was done within the realm of the contract.

To get to that we'll have to back up just a little bit and briefly review the development of the test protocol that was used for the study and also our philosophy, the philosophy of the Energy Commission in determining tire selection for Task 4.

So if we go to Image 2 we can start and briefly go over the methodology that we used to arrive at a test protocol that we could use for the main body of work. Image 2, Ray.

MR. TUVELL: Okay. I'm on page one, do you want to go to page two?

MR. LAMBILLOTTE: Yes.

MR. TUVELL: Okay. Are you able to view it on your end, Bruce?

MR. LAMBILLOTTE: Okay, next image.

MR. TUVELL: We're losing the audio on this end.

MR. LAMBILLOTTE: Ray?

MR. TUVELL: Yes, you're breaking up right now, Bruce.

MR. LAMBILLOTTE: Let's get adjusted here from our end. Let me try -- stop me if you need to.

MR. TUVELL: Yes. I think we're going to need to go back first to the beginning of the presentation. I'm on page one of your slide, the page numbered one. Could you pick it up at that point, please.

MR. LAMBILLOTTE: Okay. What we're seeing, Ray, right now is Slide 3.

MR. TUVELL: Okay, and I'm on Slide 1. So if you have a hard copy you could look at.

MR. LAMBILLOTTE: Fine.

MR. TUVELL: Pick it up at Slide 1 and

we'll go from there.

MR. LAMBILLOTTE: That's fine. Just tell me where we're at.

MR. TUVELL: Sure.

MR. LAMBILLOTTE: Let's start with Slide 1. As I said, before I get into the discussion of any rolling resistance testing we'll discuss briefly the selection of the testing protocol that was used for the contract and also the criteria that was established by the Energy Commission and implemented by Smithers Scientific for selecting and purchasing tires. I am now on Image 2, Ray.

MR. TUVELL: Okay, go right ahead.

MR. LAMBILLOTTE: When we started to work we were dealing with two US protocols, accepted protocols that covered the main body of work that was conducted on rolling resistance in the US. And those were J1269 and J2452, both of which were discussed by Dr. Popio.

We initiated work in this phase two task protocol development by purchasing 200 tires, ten groups of 20 tires each, splitting those bodies of tires in half and running each half using each protocol. The data, the results of that work were then regressed back to what we referred to as

standard reference conditions. And by that I am referring to approximately 70 percent of labeled load at 38 PSI at 50 miles per hour. And that was done with both test protocols.

So in this image you're looking at a correlation of a single, regressed set of conditions from a more complex matrix of conditions. And as you can see if you regress back to these three parameters, these three sets of parameters, using the body of data we found a very good correlation. And all this is is you're looking at the rolling forces.

If you look at the next page, Ray, shifting to page three.

MR. TUVELL: Yes.

MR. LAMBILLOTTE: We're looking at a similar depiction of the data. But here the results have been factored according to the load that was applied upon the tire. And what we mean by that is we have adjusted the data and then we have again drawn the correlation. Again, these same sets of conditions. The standard reference conditions, the 70 percent load, 38 PSI, 50 miles an hour. And again we see extremely good correlation.

And this gave us confidence at this point that we now had liberty to pick between these two protocols for other conditions with the feel that they could correlate really well. We could run more tires similarly with respect to the coefficient or separately with respect to the rolling forces and get reasonably good agreements. We'd evaluate those studies and make sure that was true.

We now selected J1269 to be our foundation protocol and that was done largely because it was a similar test procedure, it was an easier test procedure. It was a little bit easier to explain and it had an older history of use.

We next took that test protocol and said, well if we can regress to those conditions can we test directly to those conditions? And if you look now on page four you'll see a subsequent evaluation was conducted with testing directly to the standard reference condition.

So here we were looking at evaluating the test protocol J1269 with the complete implementation of the test procedures and then regressing back to standard reference conditions. And then doing similar testing with the same kinds

of tires and yet testing directly to standard reference conditions. And the correlation again was pretty good.

And at this point we had the test protocol with the use for the balance of the body of testing that was conducted. So basically we're talking a test protocol that is testing at a single set of conditions. We're looking at a 70 percent load, 38 PSI and 50 miles an hour.

So that's the kind of work that was conducted as a foundation of development to get a very simplified protocol that could allow us to screen a very large number of tires, which is the ultimate intent of the Task 4 program.

And I think I've covered during that discussion, Ray, a lot of the conclusions that follow in pages five and six. We did check on test reproducibility. For the test reproducibility we employed populations sizes of five tires each in subsequent work and we found that that gave us a very good level of confidence in the results we were getting.

So moving forward in the discussion we are now at having selected a single point test. We had originally be guided by SAE J1269 and were

ready to move forward.

I have now moved on to page seven so if you can page quickly through, Ray, I'll cover the conclusions. I really want to talk about the selection criteria for Task 4.

MR. TUVELL: Okay.

MR. LAMBILLOTTE: If we can move forward to page seven.

MR. TUVELL: We're on seven.

MR. LAMBILLOTTE: In working with the California Energy Commission and the project manager at the Energy Commission then we set up a number of criteria that we wanted to follow as we were picking tires.

We wanted to select tires for regular production. We were not interested in introducing experimental tires into the program. We were interested in looking at both original equipment and replacement tires in our population.

We were not trying to isolate tires on the basis of speed ratings or market types. We had a variety of speed ratings and a variety of market types. When I'm referring to market types I'm using the terminology in terms of, for example, touring tires versus all-season, high

performance.

We wanted to look at a broad variety of manufacturers. We did not want to limit our work to US manufacturers. We also included international manufacturers that had tires that were imported into the US marketplace. We wanted to look at a very broad range of tires so that kind of limited us in terms of numbers that we could look at. And to get a really broad look at the marketplace we only wound up settling on the basis of the Energy Commission's direction on two sizes. You'll see the large bulk of the work in this Task 4 was conducted on two radial passenger tire sizes.

Finally, there is another piece that was carved out of the program. In looking and doing so much work with these two sizes we wanted to have still a piece of the Task 4 budget and the Task 4 body of work cast aside so that we could specifically look at the one aspect of tire size.

We called that the tire size impact study and we had criteria for that also. We wanted to look at strictly a broad market replacement tire. It needed to be a standard, all-season. A very common, generic tire in the

marketplace. There needed to be many sizes available.

And what you'll find as we get into this discussion, we basically went into the marketplace and we selected one manufacturer's tire that was a very important broad line replacement tire in the marketplace and we purchased every size available. We only purchased 28 sizes for a total of 140 tires but it's a tire size impact study and we will get to the discussion of that. I'm ready for page eight, Ray.

MR. TUVELL: All right.

MR. LAMBILLOTTE: This is a summary after implementing the plan for purchases. The discussion that we just had on the criteria only evolved into a lineup of tire purchases, what you see on Image 8. The two sizes that we looked at were a P195/65R15, and that includes 195 metric equivalents in that size. And we had 76 groups of manufacturer/design combinations in that size.

We also looked at a larger size and that's the large SUV size, 265/70R17. Those are 44 groups of manufacturer/design combinations there. All of this work was done in five tire groups.

Finally, I mentioned the tire size impact study. We did carve out a portion of the project for that purpose also. Again this was all conducted in one manufacturer/design combination in the marketplace. Here again we looked at 28 sizes, five tires per size.

So at this point that is a summary of the criteria of tire selection and the test plan. And if we're ready I'd like to go on to page nine and we'll begin the discussion of Task 4, the main body of testing.

MR. TUVELL: Go right ahead.

MR. LAMBILLOTTE: First I'd like to touch on the goals for Task 4. These were the goals that were given to us from the Energy Commission for Task 4. I guess you could say this was our mission statement.

First, we only wanted to look at a very broad range of tires coming in in two basic sizes to generate rolling resistance data for those two sizes.

We wanted to then try to answer a few basic questions. The first one very simply and obviously, in looking at a very large number of tires in the marketplace in any given size, what

can we expect as far as the distribution of rolling resistance values.

We heard some statements saying that you might expect the lowest rolling resistance tires for a given size to be about half of what the highest rolling resistance tires might be in a given size. Is that really true? That's the kind of goal we were also looking for to answer in looking at this large body of tires.

For an individual that going into the marketplace who wishes to replace the tires on their vehicle, what can they expect as far as potential for correlating very simple characteristics of the tire to rolling resistance.

Right now there are no rolling resistance grade labels on the tire but is it possible for the consumer to relate to very simple things about the tire? For example, tire weights, outside diameters, tread wear ratings, tread depths, price. Can those things be related to rolling resistance? One of the missions of this project, specifically to Task 4, was to try to answer that kind of a question.

Going on we tried to answer the question, original equipment tires. We've already

heard today that we should expect lower rolling resistance with original equipment tires. How do they relate in these two major sizes to the replacement market tires we also evaluated?

Finally, going on we looked specifically at size within a single manufacturer's design/ combination. What can we expect as far as a factor of rolling resistance responses? And that's that tire impact study that I referred to.

Now I'd like to go on and briefly look at a summary of the results of the body of work. I'm sure you can imagine that the test data coming out from 740 tires being tested for rolling resistance is a very large body of information. I merely hope to give you a brief review of Task 4 in this basic presentation. I think this kind of data that will be studied for quite a few months in the future once the data has all been released.

In looking at Task 4 results first we'll look at some of the data in terms of histograms of responses, not only of the rolling resistance values but also of the tire characteristics that were being monitored, and going on and attempting to correlate those simple aspects of the tire for the rolling resistance results, and I'll close on

the tire size impact study.

This presentation was given this past fall during October to the ACF, American Chemical Society Rubber Division. It is the second presentation that has been given without the release of hard copy papers involving the program. The first one was a year ago in the fall to the International Tire Exposition conference.

At that first conference we simply presented on the issue of development of the test protocol. In this past presentation that involved the ACF Rubber Division we presented, the Task 4 results were presented in exactly the same presentation you're seeing.

Now in that presentation we did not have results of the OE versus replacement tire correlation. And that is the presentation that at this point is planned for next spring. But I can probably answer some fundamental questions about that at the end of this presentation if we need to.

So let me go on and let's look at some of this data. First let's look at some of these histograms of results. You're going to be seeing the data first on the smaller size, the 195/65R15,

and then the larger size as we go through. And we are now on page 11, Ray.

MR. TUVELL: Yes, go right ahead.

MR. LAMBILLOTTE: First and foremost let's look at the responses for the rolling resistance. We see some abnormal distribution there and we see an average rolling resistance response here of 9.7 pounds of rolling resistance. Again, this is the single point direct test that we are using for this.

The Y axis here is frequency in terms of numbers of tires that showed this response. We're looking at 380 tires of the 195/65R15s in this population and we can look at the spectrum of rolling resistance responses we saw.

Now before I go on let me explain another issue. And that is, the data you're going to see has rolling resistances expressed as rolling forces as we go through this, and rolling force is expressed in English units in terms of pounds.

It is important to note that when we looked at these tires and examined the sidewalls and we selected 70 percent of load based on our examinations of sidewalls we found the vast

majority exhibited similar load labeling on the sidewalls of the tires. On the basis of that we tested all tires in those sizes against a primary load that was shown.

So when you look at this data for the rolling resistance representing these two sizes, the correlation -- the relationship you see and the expressions that result in terms of rolling forces and pounds are the same as you would see if you were looking at the rolling coefficient. Because we've used the same loads on all of the tires that are depicted here. So differences in expressing the data between rolling forces and rolling resistance coefficients are not an issue as we look at these within the individual sizes.

Let me go on. We are now on page 12. Page 12 shows results, again, rolling forces in terms of pounds and the histogram and the distribution of responses. Here for the 17 inch, this is a large SUV size of tire. Here we're looking at the results of 220 tires. So this gives you an idea of the spectrum of rolling force responses that we saw looking at the population.

Let's go on to page 13. I'd like to briefly go through these. We can go through these

relatively quickly. To give you an idea of the other parameters we were looking at with respect to the tires. As we went through and made rolling resistance measurements. Here we're looking at the tire weight. And we can see the distribution of tire weights on page 13 of the 195. And if we go on to page 14, the distribution of weight for the 265 17-inch size tires.

So we're looking at a very -- We're still looking at a rather broad range of weight tires. We're looking at approximately a 20 pound tire versus a 40 pound tire. If we go on and look at diameters and the range of diameters I would point out here you want to look at the X axes as we go through these. These are very, very small differences in tire diameters.

So you're going to see as we go and we get in further into this discussion result you're going to find that when we attempt to correlate with some of these factors, certainly in issues obviously like overall diameter, we don't have a real good chance of seeing quality correlations because we're looking at very tiny differences in overall diameters.

Nevertheless the original mission was

take fix very simple characteristics of the tires and to see if we could ultimately correlate rolling resistance with those simple characteristics. And that's on page 16, Ray. This is the histogram with the overall diameter of the 17-inch tires. Again, looking at the X axis, very small differences in outside diameters.

Going on to page 17. The next characteristics of tires that we documented off the sidewalls of the tires were the tread wear ratings. And these are UTQG tread wear ratings. Of course if you're familiar, fairly familiar with tires, the marking of tires in the marketplace, you know that although the task is based upon an actual fleet test of tires and on-vehicle tests, the assignment range is also impacted by other things, including the stratification of the product in the marketplace.

But this is a double correlation between the rolling forces that were measured on the tires -- Excuse me, this is a simple depiction of the tread wear ratings we ran on the sidewalls of the tires. Page 17 for the 195 and going on to page 18 for the 17-inch tires. A very broad range of tread wear ratings in both cases.

I think we should expect in going on to page 19 that we're probably not going to see big differences in tread depth in these tires. Indeed we did not. I didn't mention it but I should mention at this point that we were not looking at winter tires. These populations do not include deep-tread winter tires. The 17-inch tire also did not include high-low capability products in the marketplace. For example, C, D or E load range tires, types of tires.

So within an inch of these two sizes we were out seeing deep differences in tread depth. And you can see that that's the case both on page 19 with a 15-inch tires, on page 20 with the 17-inch tire.

Price. Price has been raised as an issue that the Energy Commission wanted to examine at the very beginning of the program. It's a point that got raised a number of times, this rolling resistance as a function of the price of the tire. If it's more expensive can we expect a lower rolling resistance for a more expensive tire? We were asked that, we were asked to look at that by the Energy Commission.

And we see the price of the tire. These

are the retail prices we paid in the marketplace for these tires. All of the tires were all purchased from a single retailer who has, covers a multi-state area and who provides not only replacement tires but also original equipment labeled tires to all these vehicle dealers. And these are the prices that we paid for those tires. You can look and see on pages 21 the prices paid for the 15-inch tires and on page 22 for the 17-inch tires' distribution.

At this point if I may I would like to go on and talk about the attempts to correlate the results of these very simple, tire parameters with rolling force values that were measured. And we can go on, Ray, to page 24 and begin that work.

MR. TUVELL: Okay, Bruce.

MR. LAMBILLOTTE: So now we're looking at a number of simple correlation studies. I wouldn't put much stock in the blue line you see, it's a computer-generated line. That line is generated regardless of the quality of the regression analysis that was done within the correlation study. These are all simple layer correlations studies.

It should be noted here that there was

no attempt and no desire for the purpose of this study to get into multiple correlation analyses or non-layered correlation analyses, regression analyses. We're simply looking to see if there were just basic, simple layer relationships from a staking purpose of very simple characteristics of the tire and actual measured rolling force values.

Starting on page 24 we're looking at responses of the 15 inch tires and we can see that this point of scattered data, we looked at probably what was a much larger population result of tires from -- in a previous presentation we also saw a similar scatter here.

So we're not seeing a very high correlation here. If there is a relationship here, and perhaps there is, it's very weak. There's a lot of scatter. That's true of both if we're only getting 15-inch tires or if we go on and look at -- and I'm sorry I don't have all the correlations for the 17-inch tires due to the need for brevity here. But we see a very similar thing in looking at the actual report for the 17-inch tires.

The regression work I'm going to show you is for the 15-inch tires. It's the larger

population. I don't have the 17-inch tire correlations to show you due to the time that we're allotted here but I will tell you that the relationships are very similar. You're going to see very little in terms of linear correlations between rolling forces and simple tire characteristics. And it's true, as you'll see for the 15-inch tires, and it is also true as you will not be seeing this afternoon, also for the 17-inch tires.

If we go on, we're on page 25 now, and look at the relationship between rolling resistance forces and overall diameter. Again we're looking at extremely random results in terms of a lack of correlation here. We cannot look simply, strictly at overall diameter and correlate that with rolling resistance. And it's true as you see here in the 15-inch tires, it's also true in the 17.

And if we keep going right on through, page 26 is an attempt at a simple correlation with UTQG ratings. And again we do not see a correlation here.

The same is also true on page 27, the price. We don't see a strong correlation in

price. We're looking at very low R^2 correlation coefficients here with price. It's a question of whether or not you can expect to get lower rolling resistance with increasing the tire price, it is not true.

Going on to page 28. Similar results with tread depths. We are not seeing a simple layer correlation with tread depths.

Now the charts you have seen where we have attempted to make correlations have involved the entire body of the size populations that were examined. There was quite a bit of additional work that has been conducted and reported within the project where individual studies were made within speed ratings. Because speed ratings and the concomitant changes made within the casing of the tire to achieve speed ratings may indeed influence rolling resistance on one hand. On the other hand, our attempts to draw correlations within individual speed ratings were also not successful. Not simple layer correlations.

Again, nowhere in the project has multiple correlation analyses been used.

If I may, Ray, I'd like to go on to page 30 and talk briefly about the results of the tire

size impact study. And this is the portion of the body of the work, of the body of rolling resistance testing that was set aside to look specifically at size, attempting to keep many other parameters common when the tires were examined. So we should be on page 30.

MR. TUVELL: Okay.

MR. LAMBILLOTTE: Page 30 shows a ranking of tires. Some work was done ranking the tires also with the main body of testing that I have already discussed. It is impossible to depict that in an individual image so you'll have to examine the report. But this piece of the work, the tire size impact study where we're looking at a 140 tire total population for this sub-program, I can show you a ranking of the sizes.

And I want to raise the issue of rolling forces and rolling resistance coefficients again. If you now have a range of significantly different tires sizes and you now have a range of significantly different tire weights and outside diameters and indeed a range of significantly different loads on the tires you can see a difference depending on whether you are rank-

ordering tires according to rolling forces or rolling resistance coefficient.

So it is important as we proceed and it is important as you're interpreting rolling resistance data to understand what type of rolling resistance data you're looking at. We were able to factor out this issue when we looked at the main body of testing because within each individual size we were able to use a single loading on the tires. But now you have to be sensitive to this issue.

And the reason for that, if you look at page 30 and go on to page 31 they don't correlate. You don't see an identical rank ordering of the tires when you're looking at rolling forces versus rolling resistance coefficient. But this shows you, these two charts show you pending on which aspect you're using, which approach you're using, how the rank ordering would be for this tire size impact study.

Keep in mind also as we talk about results and we go on and we look at more results of the tire size impact study we're looking at a single manufacturer's single design in the market place, an all-season design. So hopefully some of

the major issues that we could not study, for example in terms of tire architecture and perhaps body compounding. And that may be dry-compounding also. In the first portion of the study, and this study, we would expect more things to be in common with that single, individual entry in the marketplace and looking at 28 different sizes in that entry.

Let me go on to page 32. The question now is, if we look at a broad range of different tire weights can we make simple correlations now with rolling resistance? And here as we look at the rolling forces. Now we're on page 32, Ray.

MR. TUVELL: Yes.

MR. LAMBILLOTTE: We see stronger correlations now. In looking, for example, on this page it's tire weights versus rolling resistance. We're starting to see R^2, that gives us some measure of confidence that it seems there is a correlation there.

If we go on to page 33 we can look at a similar correlation with outside diameter, simply outside diameter. Again we're talking correlation, we're not talking pure cause and effect relationships. We're simply looking at it

from a correlated standpoint at this stage.

I'm going on to page 34. We also wanted to look at the maximum load on the sidewall. This was not much of an issue to the way that we conducted the work in the rest of the study, the Task 4, that we talked about in terms of looking within the individual two sizes. here we care a lot about this kind of thing because we have a whole range of tire sizes and load capabilities within a single entry in the market. Here we're looking at the relationship between max load, the rolling forces, and again we're seeing strong, linear correlations here.

Going on to page 35. A different way of looking at the load again. on the tire, the load index. This is all the information that we gleaned off the sidewall of the tire. We correlated that again to rolling resistance forces and we're seeing a strong correlation. And that was page 35, Ray.

MR. TUVELL: Okay.

MR. LAMBILLOTTE: If we look at page 36, this is simply reiterating what I have just mentioned. That is that if we look at a single entry in the marketplace within a broad range of

sizes that are available and we measure those rolling forces. We can start seeing some simple correlations for some of these very simple, easy to interpret aspects of the tire, that the individual that is entering into the marketplace, which is the person replacing passenger tires, can perhaps relate to.

We saw pretty good correlations with rolling forces and you saw that data. I did not show you the correlations to the rolling resistance coefficient data but those R^2 values are listed there. They're lower but we still saw some measure of correlation there with the rolling forces.

I'd like to go back a bit and we'll just speak with some text in terms of our findings of the work. You've seen the data. Let's talk in terms of discussion of the findings, briefly. We can now go to page 38, Ray.

MR. TUVELL: Okay.

MR. LAMBILLOTTE: Page 38. I'm not going to read these numbers to you but they give you an idea of the distributions on the histograms of the rolling forces that were depicted at the beginning of the discussion of the data. And we

saw the range for the 15-inch tires went from 7.5 pounds to 12.7 pounds. What does that mean? That means in looking at those rolling forces we saw a range such that the lowest values were about 40 percent below the highest values for the 15-inch tires.

In looking at the 17-inch tires we measured rolling forces ranging from a little over 13 pounds to over 22 pounds. So what does that mean to us? Well, it's kind of a similar result. We saw that the highest values for the 17-inch tires, the 22.8 pounds, the lowest values were about 40 percent lower again. So that's the kind of distributions that we saw, the range of rolling resistances that were available in the marketplace as far as replacement tires go within these two bodies of tires, these two sizes. Going on to page 39, Ray.

MR. TUVELL: All right.

MR. LAMBILLOTTE: I want to just provide ourselves of this vision of the average consumer going into the marketplace to purchase tires. It's really very simple. He's not a tire expert. Simple tire characteristics to rolling forces.

As far as looking at the large body of

work that was done and looking, concentrating on the two individual sizes we could not draw a very real simple linear correlation for the rolling forces. As I mentioned, we were using the same loads on the populations of tires within an individual size so that same statement would hold also for the rolling resistance coefficient.

If we really want to look for relationships we would have to go on to much more complex aspects of the tire which were out the relevant work that was conducted so we'd have to indeed get into the tire architecture and perhaps issues like historetic or energy loss characteristics of the compounds in the tread, and perhaps not only the tread but also the body of the tire.

And a number of other issues we'd have to investigate if we wish to perhaps go on and create genuine and more viable correlations. And of course these capabilities and the tools for these capabilities are outside of the realm of capabilities of understanding of the average consumer that is wishing to purchase replacement tires in the marketplace.

If we can go on to page 40, Ray.

MR. TUVELL: Okay, Bruce.

MR. LAMBILLOTTE: Briefly on the tire size impact study. This is a description of the range of rolling forces there. We saw a wide range here also. Again we had a broad range of sizes and a broad range of weights, a broad range of other tire characteristics. We saw better correlations, as I mentioned.

But we must recognize that if we're looking at rolling forces and we're rank ordering according to rolling forces, and/or we wish to rank order with rolling resistance coefficients those two do not yield identical rank orders, they yield a very different rank order.

Going on to page 41. Again, we're still talking about the tire size impact study. We did see stronger correlations with very, very basic fundamental aspect of the tire with rolling forces and also with rolling resistance coefficient. But we must recognize here that we were looking at significant differences. Comparing significant differences in tires as compared to our original, larger body of work where we were looking at smaller differences and simple characteristics like weight and outside diameters. We were

looking within individual sizes.

So that's a very quick overview. I tried to give you some kind of a rough idea of what we found in this very large body of work. It would be impossible for any single researcher to draw every relevant conclusion from such a large body of work. And as I've mentioned, we expect there to be ongoing studies by probably a number of parties into this. But I tried to give you a reasonably quick and accurate depiction of what came out of the study from a results standpoint and what we felt was a relevant finding.

And at that point, Ray, I will turn it back to you.

MR. TUVELL: Thank you very much. So we're open for questions.

PRESIDING MEMBER BOYD: Comments or questions from folks in the audience?

Well, we don't -- Either everyone has studied this over and over and over again and understands it completely or is swamped in all the data. No one is rushing to the microphone here in the audience so I thank you very much.

Ray, do you have any comments or questions?

MR. TUVELL: No, no additional questions. Not from staff at this point.

PRESIDING MEMBER BOYD: I'm going to turn it over --

MR. TUVELL: Jim, I would defer to you on decisions regarding what time we would break for lunch today.

PRESIDING MEMBER BOYD: Well according to the agenda we have three more speakers and then aa staff presentation so maybe now would be a good time to take a break until about -- We have no more people who are going to present --

MR. TUVELL: Yes, no more remote presenters, everyone else is here.

PRESIDING MEMBER BOYD: -- remote presentations. Okay, that's fine.

All right, then I think we should take a lunch break until 1:15. We'll pick up with the next item on the agenda, with Michelin.

(Whereupon, the lunch recess was taken.)

--oOo--

AFTERNOON SESSION

MR. TUVELL: All right, we'll reconvene the workshop.

The next speaker on our agenda is Mike Wischhusen. He has served as director of industrial standards and government regulations for Michelin North America since 2002. He is responsible for Michelin's interactions with state, provincial, federal regulatory agencies on product performance issues in Canada, Mexico and the United States as well as with industrial standards organizations.

In addition Mr. Wischhusen serves on several committees which coordinate corporate positions and reactions globally on product performance issues. His prior work includes serving as director of product marketing for Michelin North America's Small Tire Division as well as an engineer in the tire design and analysis function. Mike.

MR. WISCHHUSEN: Thank you and good afternoon. Thank you for the opportunity to speak this afternoon and to respond to your request for information relative to Michelin's recent Green Meters event.

My comments this afternoon are all excerpted from the media kit that you have in front of you. So what you'll get is a synopsis of the information that was presented to the public on the 30th of October.

As a responsible citizen Michelin seeks to build awareness among people around the world of the contribution that Michelin green energy saving tires can make to the environment.

That's because choosing the right tire can have a significant impact on the environment. This is especially important today when experts agree that road transport is a major source of CO_2 emissions, one of the greenhouse gases responsible for global warming.

Fully aware of this challenge, Michelin has made the design of green energy saving tires a key component of our innovation strategy. So that consumers may integrate green criteria into their choice of tires Michelin wanted to highlight the impact of tire choice on fuel consumption and on the environment. This was the mission of the Michelin Green Meters event.

Now for a brief overview of the actual event. In each of four cities around the globe

for a period of time the Michelin Green Meters displayed estimates of, first, the worldwide fuel savings attributable to Michelin green energy saving tires compared to conventional tires on the road since 1992 when we introduced low rolling resistance technologies. That number almost 2.4 billion gallons of fuel.

Secondly, the ever increasing fuel savings thanks to Michelin green energy saving tires currently on the road today, a number of 11.6 gallons per second worldwide.

In addition, the amount of CO_2 not released into the atmosphere since the introduction of green energy saving tires in 1992, 25 million tons. And the amount of CO_2 not released into the atmosphere, updated at a rate of more than 240 pounds per second worldwide.

Michelin green energy tires include a variety of passenger car, light truck and commercial truck tires, optimized for fuel economy by reducing their rolling resistance and weight without compromising other key performance factors such as traction, grip and tread wear. Reducing rolling resistance also reduces CO_2 emissions.

Michelin has long been committed to

better mobility, meaning mobility that is sustainable for the planet and society over the long term. Thanks to Michelin's Green Meters, drivers will now have a better understanding of the environmental consequences at stake when they choose tires for their vehicles.

An aggressive commitment to reducing tire energy consumption has guided Michelin throughout its history. The increasing importance of this challenge is illustrated by the fact that the world's estimated 830 million vehicles, which are responsible for 18 percent of the global CO_2 emissions, is expected to double by 2030. With its green energy saving tires Michelin is demonstrating its concern for preserving energy resources.

An aggressive commitment to reducing tire energy consumption has guided Michelin throughout its history, as evidenced by significant technological contributions to the reduction of rolling resistance.

For example, in the 1940s the development of radial tires, which instantaneously reduced rolling resistance by about 25 percent. Again in the early 1990s with the introduction and

the widespread use of silica as a filler. Another 25 percent reduction in rolling resistance was possible.

Today further advances are still possible. Researchers at Michelin believe that significant, additional reductions in rolling resistance and weight of tires of up to 50 percent are possible within the next 10 to 15 years, a technical challenge to which Michelin is responding with special research projects.

Michelin green energy saving tires continue to deliver value to the passenger car and light truck market in North America.

In the United States where the corporate average fuel economy standards have been enforced by the National Highway Traffic and Safety Administration since the 1970s Michelin has supported its vehicle manufacturer customers in reaching these CAFE standards with low rolling resistance tires that do not compromise other key performances such as traction and wet handling. These tires are also available in the replacement market.

CAFE standards are focused on improving the fuel economy of passenger vehicles, which in

turn lowers CO_2 emissions. In both original equipment and replacement tires Michelin offers consumers fuel efficient tires that save money and help protect the environment.

Michelin also provides environmental technologies developed for truck tires. For commercial trucking fleets the cost of fuel and tires can be 25 percent of the total operating costs. This accounts for millions of dollars each year that translate into higher shipping and retail costs for you and I.

This is why Michelin transferred its low rolling resistance technologies introduced in 1992 for passenger car tires to truck tires in 1994. While the average passenger car in North America travels approximately 12,000 miles a year, a long-haul truck can rack up that same number of miles in a month and one fleet can have hundreds or even thousands of vehicles, resulting in millions of dollars in fuel and tire costs.

At the same time energy costs are at historic highs. Diesel fuel has more than doubled in the United States over the last five years and it has increased in Europe by 40 percent over that same period. Fuel is second only to labor costs

for trucking fleets.

With these factors in mind tire performance and fuel economy are not only major environmental concerns but major financial issues for the trucking industry. The right tire choice can be the difference in profitability for a trucking company.

On the regulatory and legislative fronts, by being here today Michelin is demonstrating its commitment to actively work with the Energy Commission and other members of RMA to help develop and implement regulations to fill the requirements of Assembly Bill 844, already passed by law into the State Legislature requiring the development of a rolling resistance grading system for tires sold in California.

In the United States Congress Michelin is aggressively supporting a pending role in resistance legislation that would require NHTSA in consultation with the Environmental Protection Agency to devise and implement consumer information programs to give consumers at the national level for the first time the ability to know and compare rolling resistance performance characteristics at the point of sale.

This rolling resistance information translates directly into fuel economy and will allow consumers to choose the most fuel efficient tires for their vehicles.

Michelin's effort to introduce energy efficiency grading is motivated by the benefits it would provide to consumers as well as by the company's commitment to protect the environment. This can make the consumer's choice in replacement tires an act of responsible, environmental stewardship, since in addition to providing overall fuel cost savings low rolling resistance tires are also lower in CO_2 emissions that contribute to global warming.

Thank you again for allowing me to speak this afternoon. I'd be happy to answer any questions about the Green Meters event.

PRESIDING MEMBER BOYD: Thank you very much. I want to commend you and Michelin for your active role in this area and for the comments you just made. You kind of make our case for us so I appreciate it very much.

Any questions for Michelin?

Well, then keep up the good work.

MR. TUVELL: All right, moving right

along. Our next speaker is Tracey Norberg. She is the senior vice president and deputy general counsel of the Rubber Manufacturers Association, the national trade association of the tire and rubber manufacturing industry, headquartered in Washington DC. Tracey.

MS. NORBERG: Thank you very much. I think this podium is ideally made for someone taller but hopefully everybody can see me. I apologize for not having a more complete bio but I have been involved in this issue pretty much since the conception here in California.

I think 2002 was our first meeting out here and really I think been involved in every event since. So I am very pleased to speak with you today and to share with you our perspectives of the tire industry moving forward on this issue and hopefully some positive messages that can encourage future action.

These are our member companies just represented graphically by their logos. We have eight tire member manufacturing members. And criteria for membership in our organization is that they need to manufacture tires here in the United States. They are not necessarily all US-

based companies but are companies that manufacture here in the United States and have US corporations that represent them in our association.

And I will say by point of reference, seven of those companies are here today with me. And certainly if anyone has questions that I can't answer or you'd like to hear an industry perspective they are here as well.

Just to sort of summarize what we are going to present here this afternoon. I just want to lay it out all on one slide and hopefully solicit some dialogue.

We support moving forward with the rating system and consumer information program that is captured in AB 844. We feel that the time is now to get to sort of the meat of the discussions and move the issue forward.

Certainly the testing that was conducted in the last couple of years by Smithers forms a good foundation to be able to look at how do we characterize the market and how do we begin looking at how to create a rating system.

We have been involved in an effort over the last several months to try to collect additional data from our member companies to

supplement what the Smithers data shows us. And we've begun to analyze that data and I'd like to share that with you today and begin that discussion.

To sort of round out the test methods discussion from this morning, we support use of the SAE 1269 single point test and we'll talk about that a little bit more in detail in a minute.

Just to share with all of you here today. I think for those of us who have been involved in this issue for a number of years sometimes you forget sort of the thing that brought you here in the first place. We, a couple of months ago in our group decided, let's take a look at the legislation. You know, go figure, read the legislation.

You know, it was a good sort of memory check for all of us to say, you know, what is this about, where are we going, and really what can the statute tell us about what our direction should be. So I just want to spend a few minutes talking about 844 and hopefully that can guide the rest of the discussion that I put together to share with you.

AB 844 has the two basic sort of sections, consumer information and the performance standard and related requirements. And our understanding was that this workshop was primarily to focus on the consumer information portion of that law and those are, I think, primarily where the slides I have prepared focus today.

So to look at the consumer information section for a minute. And this is just sort of my shorthand summarizing what the statute says. Basically, to develop and adopt, first a database of a representative sample of tires sold in the state based on test procedures adopted by the Commission.

And based on that database, develop a rating system of energy efficiency of tires sold in the state.

And then based on these test procedures and the rating system then to come up with requirements for manufacturers to report the energy efficiency of tires.

So just in pictures, the big ticket items. We've got the test procedure, the representative database, the rating system and the reporting requirements. And from our perspective

we would, we would say that at this point we I think have agreement on test procedure, although that needs to be formalized. We have put together information that can form the representative database. We're at step three, really, which is the rating system. But I'll go over all four of those and sort of give our perspectives on those as we discuss it.

First of all, step one, select a test procedure. We had some dialogue earlier this morning so I don't want to beat a dead horse here. But basically we represent SAE J1269 as the single point test that's appropriate for work here on AB 844. And we believe that the correlation work that was conducted as part of the Smithers testing did a good job of validating that. It found that the tests were highly correlated between the more simply 1269 test and the more complex 2452 test, which is used primarily for vehicle modeling by car manufacturers.

But I did -- I think we had some reference this morning to the global test method. Just to give you sort of, reiterate a perspective. There is a global test method that is being developed by ISO now. The tire industry is very

active in this area. A number of the gentlemen I have with me today are on the committee and working hard towards completing that test. As Mike Wischhusen mentioned earlier, it's on an accelerated schedule and we're expecting, you know, at the earliest adoption will be in 2009.

We would support when that test is completed a migration from the SAE 1269 single point test to the ISO test method. But in no way are we proposing any sort of delay or anything like that until that time. There are ways to correlate data between the two tests and that should not be a barrier in using the 1269 test method data to build the foundation for developing the rating system and consumer program.

And, you know, we commit at this point to keep everybody in California apprised of the developments at ISO and sharing those results when they're available. And just for a point of reference too. That group right now has been involved in looking at lab-to-lab correlation and trying to understand variations in testing actual test equipment and trying to get at some of the issues that we faced in the industry. They're I think doing very aggressive and active work that

hopefully will benefit the whole process.

Okay, so step two, establishing a database of tires. As I mentioned, we do have the data that was developed as part of the CEC/ Smithers testing work available in sort of the general domain at this point. There are other data sources that have been historically available, the Ecos/Greenseal data that came out in early 2003, and then the NRC report data.

We have, as I mentioned, collected data from our members and intend to supplement the currently available data with data from over 600 additional tires.

I wanted to add a little bit of sort of flesh around how the CEC project came to be to try and help those that may be newer to this issue understand what that testing can do for trying to characterize the marketplace.

Back in 2004 our group worked very closely with Arnie Ward, who was the staff director of this issue at the time, to develop a testing program to utilize the $400,000 that was made available from the waste board to try to come up with the beginnings or the outline or the framework of what a representative database would

look like.

So to so that we looked at the most popular tire sizes that the industry documents and we also looked at the most popular vehicles in California. The two tire sizes that were selected represent the two top selling vehicles in California in their tire size category and they are also in the top of the most popular tires sold in the United States.

So the smaller tire that you heard discussed earlier, the P195/65R15 goes on the Honda Accord, the Toyota Corolla. And these are cars that are very, very popular, not only in California but nationwide.

And then the larger tire, the 265 tire, is the standard size for the Ford F-150, a variety of different Chevy products, Dodge, Cadillac Escalade. You can see the list. So these are tires that are broadly found on vehicles.

And the idea was to come up with one size that was on the small end of things and one size that was on the large end of things to start understanding what the parameters of the marketplace were in terms of size.

And then to supplement that they tested

tires all along that continuum so that you had sort of -- let's see here -- as you can see here, two broad ranges of tires and two sizes on the outside, or close to the outside of the tire size availability and then one that went all the way across the marketplace. And this is just a graphic to show you the size distribution and the tire lines tested by CEC.

We believe that this really forms the basis to start developing that representative database, which is the requirement in AB 844. And as I mentioned, that data can then be supplemented with tires in other sizes to come up with, what does the marketplace really look like.

So if you can see on this graphic we have got the tire sizes that were tested in CEC. And then in purple on the second slide you can see the additional tire lines that we have compiled data for. So you can see we're starting to understand much more of what the marketplace looks like across a broader range of sizes.

And I will say, what I'm trying to hopefully do in talking this afternoon is to try and tie up a lot of the discussion we heard this morning to say, we've got a lot of data sources

out there, got a lot of stuff out there. How do we tie that up? How do we make something that makes sense to move the regulatory process forward?

So just to quickly address the other data sources I had mentioned. We have the Ecos and Greenseal data, which the NRC Report found didn't have complete enough information to really use in their analysis so we haven't included them in our analysis either. But it's a pretty small database at this point.

There is also the database that is in the NRC Report and those tires were supplied by our member companies -- the data was supplied by our member companies and they are actually included in the 600-some tires that we have compiled as well.

So what do we do with all this stuff? Basically the grand scheme here is that in order to characterize a representative database you need a number of ingredients. First you need all of the testing data, the rolling resistance coefficient data for all the tires. You need other descriptive information about the tires. And then you need industry data on the size

popularity of tire shipments. Which our association collects and makes available to the public each year.

And then in addition to that, to verify that it reflects the California marketplace. We need to review the California vehicle registration data to assess the popular vehicle models and the appropriate sizes for those models.

And lastly, and really the most important step, is to use statistical modeling to characterize the tire marketplace in terms of rolling resistance. And the idea is to get us beyond saying, gee, what does the marketplace look like for the P195/6515 and say, what does the tire marketplace look like. And through statistical modeling you can do this.

And in fact we've embarked on this effort. We've retained an environmental consulting firm to begin looking at this for us using statistical methods so that we can understand what does all this data mean, what does the marketplace look like and how do we develop a rating system.

So to show you some of the work that our consultant has done. This slide here shows the

cumulative probability of rolling resistance coefficient values. It says at the top that this is based on the CEC replacement data only. And I will hasten to say this is not the CEC data. What this is is modeling based on that data to characterize the marketplace.

Basically I think you've seen other people earlier show kind of a normal distribution curve and this is a cumulative curve. So you could show it in a normal distribution. That's not what this is. But it's basically the same kind of curve where we're seeing, you know, cumulative probability as rolling resistance coefficient values increase.

And then with the additional data that we've compiled we get more certainty and more confidence in our curve. And you can see that the curve changes a little bit but you can understand I think a little more clearly what the marketplace actually looks like.

So what about tire efficiency ratings? What do they need to do? And from our perspective what they need to do is be meaningful to consumers. I think the last thing any of us want to do is to go through all this effort and no one

uses it, no one cares. It's a lot of effort and a lot of resources and expense for the industry and also for government and it just doesn't serve anybody's purpose.

So it needs to be meaningful and it needs to be easily understood by both buyers and sellers. And that's a quote out of the TRB report. It's really key.

How do you do that? You need a limited number of rating categories. You know, 9,000 categories tells someone nothing. So we're, I think, looking more at, you know, a more reasonable level. Four, I think, has been commonly discussed and to us that seems like a reasonable level although we're certainly open to dialogue.

And we need literature that explains all this stuff to people so that they understand what does this writing mean and what does it not mean for them, their needs and their vehicle.

We think this is an area ripe for statistical analysis. We're not complete with our analysis yet. We certainly want to share that and use that as part of the dialogue. But this is really where the policy dialogue needs to be right

now.

I will say, while I'm focusing right now on consumer information and the rating system, earlier this morning we heard a lot of talk about linear regression analysis and comparison of various tire parameters. And I think Smithers made the point that there aren't linear relationships among tire characteristics.

I certainly am not dismissing any of those concerns but I really think kind of keeping our eye on the prize here and focusing on ratings right now and consumer information is the first step. Certainly there will be a lot of dialogue on relationships and the use of multi-regression analysis to understand how tires are designed and how the various characteristics relate to one another. But at this point we'd like to focus on the rating system and we believe that this is the time to do it.

So I think I've kind of walked through how to look at the ratings. The next question, step four is, develop a tire efficiency reporting system. What do you need to do there? And coming back to the statute again, which I have to tel you is a great read. It actually makes sense. And it

says, you know, the reporting should be based on the rating system. So that tells me, we've got to have this rating system.

And tire manufacturers need to report those ratings to the Energy Commission. We are comfortable at this point reporting ratings to the Energy Commission. We would also integrate that into the well-established process and information flow that happens during the tire marketing sales process. So we are very, very open to providing uniform tire quality grading to customers through distribution chains and we would anticipate that continuing for this new information.

We'd also look at, from our industry's perspective, how we can provide the rating information on websites. Whether it's individual websites or industry websites or whatever. We think that that would be a helpful component and are interested in exploring that.

And then we would be looking for all federal performance standards and information requirements that we would self-certify data and then be open to periodic audits to assure compliance. And certainly I also would say that's probably an area where there will be discussion

but just in this summary I'll kind of leave it at that point for reporting.

I wanted to give everybody kind of a flavor of what is also happening at the national level and to let all of you understand where we stand as an industry when it comes to consumer information on energy efficiency, really, nationwide.

RMA and all of our member companies support federal legislation that would establish a consumer information rating system and information program at the federal level, so nationwide. This provision was included in the past version of the energy bill. It was also included in the House-passed version of the new energy bill, son of energy bill, that was passed yesterday.

The bill is under consideration in the Senate today. I think the Senate will be having ongoing policy discussions throughout the weekend. There are some hitches, none to do with our provision, but hitches on other aspects of the energy bill that will be probably resolved behind closed doors in Washington this weekend.

But that gives you an overview. We're really trying to advocate that this be done on a

national scale.

Of interest to California, the federal legislation does include a preemption provision and the industry's intent was never to preempt what California is accomplishing here but instead try and prevent other states from developing information that would be duplicative and confusing for consumers.

We truly believe that consumers would benefit from information that makes the most sense and is the most consistent. And multiple consumer information programs that do different things just don't get you there when it comes to a consumer. So we did try and look at preemption from that perspective.

At this point, potentially, there could be two rating systems being developed out here at CEC but also through NHTSA. And we believe that consistency between these programs will ultimately benefit consumers. You know, if you have one system with four stars and another system with colors and another system with letters or whatever it doesn't tell consumers anything different, it just looks confusing. To us that doesn't achieve environmental goals. We want people to understand

what their choices are to be able to make them.

So just so we're clear. My goal really in coming out to California on a very irregular basis to work here with all of you is also to try and marry up what's happening on the federal level. So to the extent that there's not disagreement, that we could do something consistent. And even if there is disagreement, that we could have dialogue and look ultimately at trying to provide consumers with meaningful information and that makes sense. And I think we hopefully all share that goal.

I did want to mention a little bit about what is happening in Europe because I think there was some mention of it earlier. Certainly down the road if we want to talk more in-depth about Europe we're happy to do that but in this summary it is difficult to accomplish everything.

In the EU the European Commission is also developing tire efficiency ratings and consumer information. Our companies are global companies. They're all actively involved in this issue. And what we're looking at is if there are synergies among California, this national approach and EU systems we'd certainly be interested in

having a dialogue on that and maximizing the effectiveness of any information provided.

So our recommendations for moving forward. Number one, adopt the single point SAE test. You know, call it good, we've got a test. Let's move on with that.

Use the data that has been developed as part of the Smithers program plus this additional data that we've collected to characterize the marketplace.

And then begin this formal dialogue among stakeholders to develop the rating system.

Establish a rating system so that manufacturers can begin providing information to consumers.

And then establish a reporting mechanism.

And that's where we are as a tire industry. I'm happy to answer questions and I'm happy to roll up our sleeves and begin the dialogue.

PRESIDING MEMBER BOYD: Thanks, Tracey. I appreciate hearing all you've had to say. As I said at the beginning of this hearing, I had a feeling we'd come a long way in the last few

years. A question. Well, and first let me say, we'd obviously love to continue to work with you and your folks. And I see the benefits and the merits of harmonizing not only in the country but throughout the world if that be possible.

Do you have any idea of what a federal timetable might be to address this issue if they are given legal authority to do so? Presuming passage of the legislation.

MS. NORBERG: I think that's the biggest hurdle right now. Because as you're probably aware, this provision is tied up in the larger energy bill. Our provision is not controversial. There are a lot of things in the energy bill that are very controversial so the big goal now is to get a bill out of the House and Senate that the President will sign.

PRESIDING MEMBER BOYD: I appreciate that was an impossible question to answer.

MS. NORBERG: I think the bigger question with NHTSA is certainly we hadn't really begun that dialogue with them because we need legislation first. But our message to NHTSA would be the same things we've shared with you now. We have a test method, we have a database. Let's

rate tires and,you know, develop that program. So we'd be looking to move forward as expeditiously as we can.

PRESIDING MEMBER BOYD: Everything you say makes academic, excellent sense. As I've relayed to you before, a dilemma always for the nation/state of California in these areas is, and this is one where maybe serendipitously we've had more patience, is the inability to wait for the federal government to move, it seems like in practically everything we do. So I hope harmonization is possible.

I don't think we can necessarily wait for harmonization if it is not probable in the very near term but, you know, it makes sense to strive for all those goals and objectives. Perhaps we and Europe can harmonize and influence the rest of the United States but who knows what the dialogue may be.

MS. NORBERG: You know, I would say looking at 2007 I don't know in 2003 that we would have anticipated being in Congress and questioning who would have a program first. And really, you know, in 2003 I might have thought I would be in Congress asking to adopt California's rating

system.

But, you know, we are where we are and I guess, you know, from the perspective of the eye on the prize and looking at the consumer interests. We'd really, you know, like to have programs, you know, both in California and federally that make sense and give consumers that information. I will say that the bill itself has a two year implementation schedule. It actually asks for promulgation within 24 months.

PRESIDING MEMBER BOYD: I guess another dilemma I have, based on now decades of working in government, is for some strange reason the federal government agencies just have a tough time adapting or adopting something that California did. We run the risk of differing programs but we all will strive to see that it is the same.

That is if we get past the lowest common denominator dilemma, just to any kind of a program. Let's see what we can do. I appreciate the forthright presentation and the desire to work together and let's see what we can do. I am not coming back for a third term. I want this to be on this term, in any event.

MS. NORBERG: How long do we have?

PRESIDING MEMBER BOYD: I may not even stay the duration of my second term. Any questions? I see a question.

MR. OLSON: Hi Tracey. Tim Olson, California Energy Commission. I wonder if you could comment on the percent of sales that your members provide US-wide and in California and also comment on foreign sales. So meaning, if you're going to supply data your database, does it not include some of the tire manufacturers?

MS. NORBERG: Sure. Our member companies represent over 90 percent of the tires that are sold in the United States. Of that 90 percent it is not all tires manufactured in the United States. Our companies are global so many tires they sell are manufactured in other global facilities. So we do cover a large portion, a vast majority of the tire marketplace.

But there are tire companies that aren't members of ours. There are a couple of Korean companies that do not have manufacturing in the United States that also provide data to us so that 90 percent figure does include their product as well. And that's Kumho and Hankook.

But there are a number of Chinese tire

companies, over 200 tire companies I think in China at this point, that do sell tires in the United States. And those would be a segment of the market we don't cover at this point. Did that answer your question? Okay.

PRESIDING MEMBER BOYD: Any other questions, comments? Thank you, Tracey. Alan.

DR. MEIER: It's Alan Meier. And Tracey, thank you, it was very useful. I had a question about the data, the RMA data. Because I guess we've had the Smithers data for a year.

MS. NORBERG: You've had the Smithers data for a year, we just got it in July.

DR. MEIER: All right, okay, it's been out -- I'm sorry, I'm exaggerating. But when will we be able to see the RMA data? Is that available?

MS. NORBERG: We are undergoing analysis right now on quality. You know, QA/QC of that data. But our intent is to provide it to the Energy Commission.

DR. MEIER: Would it be appropriate also to add in some of the European data or Japanese data or Australian data or anything like that?

MS. NORBERG: The bill in California

really focuses on tires sold in California so information about tire products sold in other regions is really not applicable here.

DR. MEIER: But in terms of establishing a label, for example. If you're harmonizing a label or a rating system with Europe then wouldn't you want to know what the whole spectrum is? Many of the cars are essentially the same, aren't they?

MS. NORBERG: We were really focused, you know, on the legislation here in California and what it is looking at is tires sold in the state of California.

DR. MEIER: Okay. Well I'm just trying to think about insuring that we have a robust label that can handle changes in the future so we don't have to completely revise it. I know, for example, that the Europeans are having trouble with their A through G label because they've created these bins that may be too narrow, given the uncertainty in the measurement procedure. One measurement lab could say this is a B tire but another measurement lab would say this is a C, or worse, even a D tire.

So I'm trying to look a little bit forward so we don't have to redo this whole thing

later on and that's why I'd like to try to incorporate as much data as possible to make some sort of --

MS. NORBERG: You know, I think in California we're constrained by the legislation which says, tires sold in California. But in terms of a broader perspective you do bring up a point that is certainly something you have to consider, which is that tire markets are different globally.

So when we're looking at harmonizing programs, the extent to which they can be harmonized really depends on what the marketplaces are in those regions and whether they are similar enough that harmonization makes sense.

I think that's part of the ongoing dialogue. In the slide I said, synergies. I'm not saying they have to look exactly the same. They shouldn't look exactly the same but it is part of that process.

DR. MEIER: Okay, thank you. Actually I do have another question. Do you have any viewpoints on what a label might look like for a tire?

MS. NORBERG: I think, again, if you

look at the California legislation it specifically says, it gives kind of examples of website information, brochures and point of sale information. So that's the kind of information that we support, which would be the point of sale type information or web-based information.

So when you say *label*, I think *label* means different things to different people. In our view, and really the view that I think -- We haven't heard anybody disagree with this when it comes to actually when you go buy a tire you don't see a label on the tire. It's typically ripped off by the guy putting the tire on your car and you don't read it. So the idea of actually sticking a sticker on the tire may not communicate the information we're looking at communicating to consumers. The technician sees the sticker and it's gone.

So really the point, you know, our point of view is that point of sale information at the counter with the tire dealer that is selling the tire and on the internet prior to the sale would help provide consumers with information.

DR. MEIER: And I guess finally, I was asked this question and I squirmed uncomfortably.

How effective do you think a label will be?

MS. NORBERG: I think you need to look at what you're trying to affect. If you're trying to change every consumer's mind about everything, go watch somebody buy a refrigerator. Somebody looks at the sticker with the energy information and then the next guy is looking at whether his coffee cup fits in the thing, you know, or whether they like how the ice maker works.

Everybody looks at different things when they buy every product and that's just reality. So we're trying to convince every person to do one thing. I kind of hope not, you know. I like diversity in the marketplace. But are we trying to influence manufacturers? I think that that is really the more salient question.

This industry has provided information on tire parameters for 30 years, give or take, for uniform tire quality grading. And those grades themselves have caused intense competition within our member companies, certainly, and caused them to increase performance on those performance categories, independent of what consumers think one way or the other.

So, you know, are you trying to

influence the market or the marketplace or the consumer? I think it's worth really looking at that. For example, on the uniform tire quality grading, the traction grades. Initially when those grades were adopted we had A, B and C. Well good luck trying to find a C graded tire now.

Basically NHTSA had to create another category, a AA, because tire traction performance had improved so significantly that A, B and C weren't really appropriate anymore, we needed AA, A and B. So that's the kind of competition that we see in this industry and where information can really work.

I actually recently had a conversation with a former NHTSA person about this. And they see that even in the car companies, the crash ratings, for example, and the NCAP program. It creates competition among companies to improve performance. So effectiveness I think is an interesting question and one that I think we don't want to look to broadly about what we consider to be effective.

DR. MEIER: I came running up here when you started talking about refrigerators again because I had a graduate student who pretended and

actually did sell refrigerators for awhile just to watch how people responded to the label. This is the energy guide label.

And the amazing thing he discovered was that about 30 percent of the people who saw the label misinterpreted the label to see that -- The big number was the energy use but 30 percent of the people thought the big number was energy savings. So 30 percent of the people were trying to get the wrong result. So this is one reason labeling, the rating system is very important.

And then you mentioned the wear problem where they had to develop a AA.

MS. NORBERG: Yes, it was traction.

DR. MEIER: Traction, excuse me. Which tells me that that was a label system that was a mistake. That was poorly --

MS. NORBERG: Absolutely not.

DR. MEIER: No, no, no, excuse me.

MS. NORBERG: Absolutely not.

DR. MEIER: A poorly designed label system because a consumer doesn't automatically know that there is an A. If they think they're getting an A they may not know there is a AA.

I mention this only because Europe had

the same problem with their A through G labels for refrigerators. Sorry I keep referring to refrigerators but there are some good stories there. The European Government, the Commission, decided rather than re-categorize all the labels, set it down, they created an A+ and an A++ grade. And the consumers would go in and they think they're buying -- if they're buying A they think they're buying the top and they don't realize that there's an A+ and an A++.

And from a consumer perspective that is a poorly designed labeling system. It's because the government did not recalibrate the whole labeling system when they discovered that there were all these much higher quality units up above.

And this is something -- This is not a criticism of you or anything, it's just that we have to think hard about how to make a rating system or a labeling system that is flexible enough in the future to accommodate the improvements. And I can assure you, we're going to see huge improvements in rolling resistance and we want to make sure that we don't have this A, AA, AAA kind of problem again in the future.

MS. NORBERG: You know, I think that

those are really important dialogue points when we -- once we've got kind of, you know, the categories for a rating system. You know, what do we call them. Sure, I think we probably all have a lot of input that would be valuable.

I would say that in AB 844, and even in the federal legislation too, there is a review provision built into the legislation. So as the marketplace changes those are the kinds of questions that definitely should be explored.

DR. MEIER: I hope you're right. I'm just pointing them out now. This is the time to start thinking about these things.

MS. NORBERG: Honestly, Michael in sharing the traction example was not really to debate A or AA or whatever you want to call it. It was really to show you that information does drive innovation and we've seen that in our industry.

DR. MEIER: And I agree.

MS. NORBERG: So anyway.

PRESIDING MEMBER BOYD: Any other questions? If not, thank you, Tracey. Thank you very much.

MS. NORBERG: Thank you.

MR. TUVELL: All right, we're ready for our final speaker in the first session and that is Luke Tonachel.

Luke is a part of the energy and climate team of the Natural Resources Defense Council's San Francisco office where he works as a clean vehicles and fuels policy analyst. His work focuses on reducing global warming pollution and US oil dependance through policies that promote advanced vehicle technologies and cleaner, more sustainable fuels.

Prior to joining NRDC Luke directed product development at a San Francisco software company and served as a nuclear engineering officer in the Navy. He holds a master's in public policy from the University of California at Berkeley and a bachelor's degree in mechanical engineering from the University of Rochester. Luke.

MR. TONACHEL: Thank you, Ray. Good afternoon, Commissioner Boyd, advisors, staff. Thanks for the opportunity to come here and speak with you today.

You know, one of the things that the federal energy bill, as we all know it has an

important clause in it for increasing the fuel economy of new vehicles.

And one of the things that is exciting about the potential for fuel efficient tires is that they are actually an improvement that we can see on that existing stock that is out there. We don't have to wait for the 15 years for the vehicle fleet to turn over for that improvement. So that is just something to keep in mind as to part of the importance of being able to put forward a technology like this and be available to all those cars already on the road. Hopefully though that they won't always be stuck in traffic like that.

I'd like to start off with a little discussion that, you know, puts a little bit of a California perspective on what we're doing here today. Of course we know AB 844 is driving the efforts here in California and we also know that we've got a little bit of a slippage in the time scale. And Commissioner Boyd, I appreciate your opening comments today and we look forward to seeing sort of a schedule of how we're going to complete the requirements of that bill.

Also it's important since the passage of

that bill back in 2003 to think about what are the other major policy drivers here in California. And of course we have decreased oil dependence that are statutory or state targets through AB 2076, which I guess would have been maybe before the Nation's bill. The 2007 IEPR, the recent Alternative Fuels Plan. Also reduction in greenhouse gas emissions. We know that we have a cap in the state on greenhouse gas emissions and tire efficiency is a piece of the actions that are expected to achieve some of those reductions.

We just talked a little bit about the national tire efficiency program. And I just want to point out that while a tire efficiency program at the national level is an information program, California's program goes a step further and actually establishes minimum efficiency standards.

Mike Wischhusen talked a little bit about the Michelin Green Meter program. That is an example of where there's industry leaders moving forward with trying to get this information out to consumers. That they say that they've got a product, they can already deliver savings and trying to get information to consumers about how they can achieve those savings with those

purchases.

I mention Yokohama here just because I was impressed by a display that I saw at the auto show down in LA back in mid-November. They have their new -- it's a tire, I believe it is only sold in Japan but they had it there on a Prius. This tire is a new energy tire that is striving for a better ecological balance in the way it is made. So they are using less petroleum in the production, they are using natural rubbers and they are using citrus oil.

But there was another display along with the tire and that was where they had this sort of what looked like a roller coaster, the bottom of a loop of a roller coaster, and they had two balls of two different tire materials. They put them next to each other on this track and then they rolled them back and forth. And basically the point was that the materials that they were using in these tires lowered the rolling resistance and you could see it. You could see obviously the one with lower rolling resistance kept on rolling.

So while that's only a Japanese tire today it is in the marketplace and certainly shows some of the technical potential. So what I would

like to see, obviously with all this momentum, is that California keeps that momentum going.

And Commissioner Boyd, just as you were saying, we can't wait necessarily for a federal program. We need to take on the leadership that we have here with this program and keep it, and keep it moving.

Just to quantify specifically what kind of benefits could we see here in California. You know, a typical tire is on a car for three to four years. The NAS study said that 80 percent of vehicles on the road have replacement tires. Somewhere in that range, 75 to 80 percent.

The tire program within California requires that there's no, you know, adverse impact on scrap tires, which means that the technology solutions that are put in place to achieve rolling resistance, and this is something going back to Dr. Pottinger's presentation, need to avoid a reduction in wear but they need to keep what customers currently expect for wear. So that would lead me to expect that tire wear would be maintained over the life of the tire.

So taking some of those assumptions in place, and I looked at the 2020 benefits. And the

reason I looked at the 2020 benefits is that it gives time for the market to evolve and also 2020 is when that cap for greenhouse gases exist within California. So here are some of the numbers.

You know, just with a two percent increase in fuel economy, and two percent would be probably achieved with a ten percent reduction in rolling resistance. The NAS report said one to two percent so it's in that range. And I also put up two and three and four percent because I think that there's quite a bit of opportunity here for technological advancement. So these are the gasoline savings in millions of gallons and the greenhouse gas savings.

You know, just taking a look at those numbers, if you think of the Pavley greenhouse gas fuel -- tailpipe standards, those are expected to achieve something on the order of 30 million metric tons by 2020. So this is only about a tenth of that. But if you take this in context of other measures that are being considered as part of the climate action team you realize that they are considering measures that are well below one million metric ton in savings by 2020. So this is a -- it's still a significant amount of savings

with regard to meeting the state goals.

As I've mentioned several times, in terms of where I see or my thinking on where -- actually I shouldn't say it's my thinking, it's the thinking of other reports on where the technology can go.

The NAS reported that there was already a 20 percent change in rolling resistance among the tires that are out there that they looked at, which would lead to about a four percent increase in fuel economy.

We heard earlier today the Smithers data had about a 40 percent range.

Then there's a couple of quotes here and I appreciate Mike's earlier presentation. I pulled out some quotes from the press kit that he talked from. And he mentioned this first quote, basically where they see opportunities for up to a 50 percent improvement in fuel economy -- I'm sorry, in rolling resistance. That 50 percent, as it's noted here in this lower quote, if you got a 50 percent increase in rolling resistance performance then you could get as much as a ten percent increase in fuel economy.

That means that with innovation, which

appears to be already being worked on within companies, we could see much bigger numbers than what I have even thrown up there for potential greenhouse gas reductions.

Now from a consumer perspective there doesn't appear to be any debate these days that this is really a cost-effective way of achieving fuel consumption reductions for the consumer. And this $2 per year cost for low rolling resistance technology is something that comes again out of the NAS report.

So I applied that to what kind of fuel savings you would get with a two to four percent increase in fuel economy. And you can se in all cases your net savings in a year is anywhere from $20 to $45 there for something in the order of a $2 per year expense. So easily cost-effective.

And you can see that my assumptions are in there and I accounted for an increase in the fleet fuel economy over time.

PRESIDING MEMBER BOYD: Do you think we'll ever see $2.50 gasoline?

MR. TONACHEL: So the reason I used that is because if you look at an IEA forecast, which is more pessimistic than the EIA forecast, the EIA

says that in the 2020 time frame, actually I think even in the 2030 time frame, that you're closer to $2.10 a gallon. The IEA had it somewhere around $2.50 a gallon. That's obviously very conservative.

PRESIDING MEMBER BOYD: In our recent projections we gave up on both of them and used a higher number.

MR. TONACHEL: Well even with a low number you can see you save plenty of money.

PRESIDING MEMBER BOYD: A point well made.

MR. TONACHEL: There was just a discussion about, you know, what is the impact of standards. I'm just using this slide as an illustration of really what we're overall trying to achieve here. And if you look, the dotted line here is representative, is there to represent the normal distribution of rolling resistance among tires in the OE market. It's obviously a smaller market, a lower number of tires sold.

Whereas the solid like represents the replacement tire market, obviously with a higher recognized higher rolling resistance. And also we didn't see it in the Smithers data that was

reported today, it is recognized that there is a difference between the OE market and the replacement market in terms of average rolling resistance.

So what is our goal here? And I set up some buckets. You know, these are just meant to be illustrative of potential rating buckets. Maybe you need more, maybe you need fewer. Of course there could be different types of labels on them. With the labeling system we're hoping that we have manufacturers starting to compete and that causes a shift towards a better rolling resistance performance in the replacement tire market.

And then eventually through the implementation of the California program you establish a minimum efficiency standard and that essentially would cut off the low leg on the replacement tires. And that could also force a shift, a further shift towards better efficiency performance.

So again back to this question of how much does the label do or just the rating system do? Well I think to really achieve the savings that I've estimated here we need both. We need a rating system and ultimately we need the standards

as well.

Okay, I want to close this brief presentation with just a few design principles. Alan already mentioned some things that we're going to have to be thinking about as we go forward and design this program. I wanted to go through some other thoughts and some are related to those.

You know, fundamentally we want to protect the industry leaders. Those companies that get out there and provide these products. We want to make sure that they get credit for the more efficient products. I other words, other products can't come along and use a label that would confuse the issue where they don't justify having that label.

And we also -- You know, that's not only to protect the industry leaders but it is also there to protect the consumers, right? So that they're actually getting what they think they're getting. So we have to assure data accuracy.

We also have to make sure that we have a standardized procedure, that I think everybody here agrees with, goes across all the manufacturers products and it looks like J1269

might be a good candidate for that.

And of course it needs to be precise. We need to define exactly what sort of, what level of precision we need out of that test and how well it can be repeated.

I think we also need to explore the idea of an independent third party lab doing the analysis and making sure that those labs that are responsible for doing that analysis have the proper certification. And we'd have to define as a group what that proper certification was.

The next point here, rating and testing system sustainability. I'm using that term *sustainability* to reflect the fact that this program needs to take on a long life that maybe goes beyond what funding has been currently allocated towards a California program. In other words, we want this to live long beyond what it takes to get the program in place.

We need to have -- So we have to have ongoing analysis that is well-funded to keep pulling in the new data and checking its accuracy to maintain the database. And then also to go out there to do random testing of products to make sure that they're meeting the standard or the

label that they've achieved.

Fundamentally we need labels that are easy to understand. Everybody agrees on that point. They're useful to customers. And I agree that it should be both for point of sales but also a label that is available for pre-sales research so people can get on the web and compare tires before they even go into a tire store.

This system should also have a challenge process so that this is analogous to energy efficiency programs that are already out there such that manufacturers can compete against each other if they feel that somebody has inappropriately provided a rolling resistance value that they don't think is valid for the tire. They could test it on their own or have somebody test it and then there would be a whole challenge process to go through there.

And finally there is going to need to be a high degree of dealer education in addition to education of consumers through the label. And I add on here that there's also an opportunity for the state to be educating their fleet managers and the fleet procurement officers.

My last slide is that we should leverage

existing programs out there to do this. There are models that we can take a look at that may serve as a way of kicking us off and sort of laying the administration foundation for doing this. This one example that I provided, the Cool Roofs Rating Council, and you can see the website there. This is an independent, nonprofit organization.

It does I think receive funding through the industry but it has oversight. And that's key. It needs to operate as a separate entity and have public interest oversight to make sure that it's, you know, turning out verifiable, repeatable and accurate data that the public can trust.

So that is what I had as a presentation, thank you. Any questions?

PRESIDING MEMBER BOYD: Thanks, Luke. Questions? Susan.

ADVISOR BROWN: Yes, I had a couple, Luke. If you wouldn't mind going back to slide five on the fuel savings estimates.

MR. TONACHEL: Yes.

ADVISOR BROWN: The incremental cost you quote, isn't that per tire, the $1 to $2?

MR. TONACHEL: That's actually -- In the NAS report it's $1 to $2 per year and they --

ADVISOR BROWN: But is it per tire?

MR. TONACHEL: Is it per tire?

ADVISOR BROWN: I thought it was per tire. I just wanted to clarify that.

MR. TONACHEL: Well they put it in as a per year cost, they didn't put it as an incremental cost for buying the tire.

ADVISOR BROWN: Maybe subject to check.

PRESIDING MEMBER BOYD: But it seems to me it would have to be per tire, otherwise we'd have to multiply two by four to get four tires on the ground for it to be a vehicle.

ADVISOR BROWN: I was just trying --

MR. TONACHEL: Okay, I'll go back and check this but my understanding was that it was, it was basically they looked at what was the cost to buy a set of tires, incremental costs. You know, other reports out there said incremental costs to buy a set of four tires, you'd spend $5 to $12, right. And then you break that up over the four year life of the tire, then that's in the order of $2 a year.

ADVISOR BROWN: Okay, now I've got you. And the fuel economy improvement estimates, Luke. That's on the vehicle, right? I'm just looking at

your chart again.

MR. TONACHEL: That's the fuel economy improvement of the vehicle itself.

ADVISOR BROWN: Of the vehicle, okay.

MR. TONACHEL: And you can see that I used the almost 25 miles per gallon vehicle and it's a two percent increase from that.

ADVISOR BROWN: Okay, thanks.

MR. TONACHEL: Any other questions?

PRESIDING MEMBER BOYD: No other questions? Thanks very much, Luke.

If I am not mistaken, Ray, that ends this particular section. I have only one blue card up here from a member of the public and this might be an appropriate -- or a stakeholder I should say. It might be an appropriate time for that to occur. Terry Leveille of the California Tire Dealers Association. Did I get your name right?

MR. LEVEILLE: You sure did. Thank you very much, Commissioner Boyd and advisors and staff. Terry Leveille. I represent -- I own the firm TL and Associates and represent the California Tire Dealers Association. We have two chapters, Northern California and Southern

California.

And they asked me to appear today. I did provide Ray with a letter from them. But I am not going to read the letter. I just want to raise a few points here that I think are pertinent coming from the California tire dealers. And these are basically independent guys and women. They represent probably 600 to 700 tire dealers throughout the state of California and they are kind of the bottom line of where we see the potential for AB 844 coming to roost.

And while the focus is, as Tracey said, primarily the rating system and that type of thing, the bottom line for the tire dealers is concern about the item in the bill on the energy efficiency program that would require replacement tires to be as effective and energy efficient as original equipment tires. As far as they are concerned that is a major concern of theirs.

They foresee or they see the potential of a mandate coming down in the state of California that they cannot sell tires that are less energy efficient than original equipment tires, even if that eliminates the ability of the consumer for choice. And that is their primary

concern.

We look at consumers as when they come into the tire shop as looking at the factors of tire longevity, price and safety right now. Adding fuel efficiency is fine. We more than -- We don't have a problem with that as long as the state does not mandate certain tires cannot be sold in California.

There is a variety of problems that we have outlined in our letter that would cover that but we see some real innovations. And I think that the Michelin and the Yokohama experiences are two of the ones we've seen lately that have been very encouraging to the tire dealers. And we hope that that continues and it broadens with other tire manufacturers as well. We are very supportive of that.

At the same time we are very supportive about providing greater information on fuel efficiency to the customers. That being said, we want to maintain the customer's ability to make a choice in that tire. And our major concern is a fear that somehow down the line that that choice will be somehow abrogated. We just wanted to convey that once again. We've done it before and

we do it once again and we'll probably do it in the future. But thank you very much for the opportunity to take our testimony.

PRESIDING MEMBER BOYD: Thank you and we hear your message.

All right, Ray, that's the only -- is there anyone else out there who wants to make a comment of any kind at this point or we'll go on with the published program?

All right, Ray, take it away.

MR. TUVELL: All right. I want to talk a little bit about the implementation of AB 844 but I also want to do a little additional housekeeping here. First off, many of you received written copies of the notice for this first workshop meeting. And what I want to announce, that will be the only written mail-out that we intend to do on notifications.

So for the future what we would encourage you to do is to take a close look at the workshop notice. You will notice that it lists that we have a website, and I am going to go to that real quick here. If you go to that website you will see our website for the tire program specifically.

You will see on the left that we will be providing you direct links to all the documents that we have already. Certainly every presentation presented today will be up on that link -- up on the website soon. The presentations as well as any public comments or anything submitted to the docket.

Down here in particular is where I want you to draw your attention. This is where you can sign up for the ListServer. And if you do that then you will be certain to get notifications of all future workshops, everything associated with the program. So you can take a proactive way to do it like that or if you just put it on your calendar to check our website every now and then to see if anything new comes up you can do it that way.

In the workshop notice we also mentioned that we would like to get written comments regarding today's workshop by no later than the 21st, okay. We view this as the opening of the dialogue, the public dialogue on this program. So many concepts or ideas that you've heard today, presentations that you've heard today, certainly things that I am going to be talking about, this

will be our first opportunity to have this open discussion. Well clearly this isn't the end of that opportunity for that discussion.

And most importantly, by giving you an opportunity to digest a little bit of what you've heard today and then respond to us in writing to anything you've heard, as well as some questions I am going to have, is going to be very, very important to moving the process along. Okay.

All right. Now what I want to do is lay out what I am going to say is a basic framework of the considerations we're having on moving forward. And I am saying this is a basic framework because, in fact, in many cases we don't have a lot of details yet and you will see that as we go in a little further.

So we're interested in getting this dialogue going with you to give us your input and your ideas and your perspectives to help this process along so we can work together to achieve this common goal in the most efficient way possible. We've talked a little bit about the enabling legislation.

I guess one other thing I should say. I want to introduce Caryn Holmes from the Energy

Commission staff. She will be the legal counsel who is going to help guide us through the process. Maybe it's appropriate, Caryn, that I have you come up now and talk a little bit about, you know, the process, the CEQA and to the extent we can and the schedule before I launch into my slides.

MS. HOLMES: Good afternoon, I am Caryn Holmes. I am the staff attorney that will be working on the formal rulemaking portion of this proceeding. I do not have a PowerPoint presentation to make to you.

For those of you that haven't been involved in rulemakings before, at the Commission we typically divide them up into two phases. The first phase is an informal phase where we have meetings like this and there's a lot of give and take. Through that process we develop what the scope of the rule is and we start to work on actual proposed language that would be formally adopted by the Commission to implement the program.

When the Committee gets to a point where they feel that they are pretty close to a program that they think is going to work and going to be acceptable to the parties the formal process

begins. The informal process can last anywhere from a month or two up to a full year, depending upon the complexity and the number of parties. How much disagreement there is about how the program should be implemented.

Once the formal process starts the Commission will have in place proposed language. They will have in place a couple of supporting documents that describe the rationale behind the language that the Committee has selected. There will be cost estimates associated with the compliance and the various program elements.

These documents are formally published. And that's the one exception to your rule about the ListServer. Those get mailed. So we have to have a mailing list for people so that we can send out that particular notice. It would be helpful if we could get that from people as well as the e-mail addresses. It will only be used for the formal process but it is an important element.

Once we start that formal process with proposed language there is a 45 day public review period. Any comment that a person or a party makes during that comment period we respond to. The Committee can decide to amend the regulations.

If they do so it's another formal process with written notice of amendments. Another comment period is established.

When that process is complete the package goes to the entire Commission for adoption. Once the package is adopted by the full Commission there is a review process that actually occurs at another state agency so usually it's the staff attorney who pulls together a bunch of documents and sends them over to this other state agency called the Office of Administrative Law. They take 45 days to review the proposed package and the regulations either go into effect immediately if there is an urgency need for that or they go into effect 30 days after they are approved.

The formal process -- It is very formal so we like to have everything to the extent that we can established and in place before we begin that. This process where people are providing us written comments and comments at the workshops will be very important because the closer we can get to a consensus about how this program ought to be created and implemented the easier that formal process will go.

I would be happy to answer any questions about rulemakings. I suspect you'll all become familiar with them for those of you who aren't already before this is finished. Yes?

MR. TONACHEL: Luke Tonachel with NRDC. Just to clarify, on the date. Once you move into phase two and a document has gone out for public review you said a 45 day comment period, review and comment period. And if after that 45 days the Commission votes to approve and it goes to OAL, OAL only has 45 days to approve it?

MS. HOLMES: Yes, let me step back and give a little bit more detail. It's a minimum 45 day review period. At the Commission it is almost always more than 45 days just because of the fact that the proposed regulations are always published on a Friday and it is never exactly 45 days between a Friday and a Commission Business Meeting. So it's usually a little bit more.

And sometimes it can extend quite a bit longer if there are comments and the Committee decides that it wishes to make changes. Because then there is another formal review process that begins.

Once the Commission has adopted the

package it goes to the Office of Administrative Law and the Office of Administrative Law is making sure that we have complied with the procedural requirements that have been established for rulemakings. As well as they do sort of a broad-brush review of whether or not the regulations are consistent with the statute and have we used appropriate language. There is nothing that is confusing or ambiguous in the regulatory language. That process takes what they call 30 business days, which of course turns out to be roughly 45 days. Does that answer your question?

MR. TONACHEL: It did. It seems shorter than the ARB OAL review so that's why I was wondering.

ADVISOR BROWN: Caryn, I was going to ask if you could give us a ballpark of what's a typical rulemaking take. And by typical I mean a non-controversial one.

MS. HOLMES: I've never been involved in a non-controversial one. The shortest one I have been involved in was about six months from beginning to end.

PRESIDING MEMBER BOYD: Luke, that's what would make this more like an ARB rulemaking.

I think we are all subject to the same time limits, everything else under the Procedures Act of California.

MS. HOLMES: That is correct, it is the same. It's just that it frequently --

PRESIDING MEMBER BOYD: And depending upon the -- depending upon the magnitude of comments made on the final approval, that dictates how long the legal staff has to spend reviewing and commenting before submitting to OAL.

MS. HOLMES: That's correct. If everything goes well we can submit that final package to OAL within a couple of weeks. But if we have 150 comments or more to respond to it will be months before it goes over there. Their review period may start significantly after the Commission's adoption.

MR. TONACHEL: Thank you.

MS. HOLMES: Thank you.

PRESIDING MEMBER BOYD: Thanks, Caryn.

MR. TUVELL: All right. So we talked a little bit about the enabling legislation, AB 844. We had hard copies out here on the desk when you came in and of course you can access that as well as everything else through the website to look at

it in more detail.

I have done an over-simplification here also, as everyone else has done today, in terms of looking at it and breaking it down into its fundamental components as we're reading it. And I think it is highly consistent with what everybody else has been saying. To: adopt a test protocol, adopt reporting requirements, a rating system, a database, and ultimately the consideration of adopting efficiency standards subject to meeting specified conditions.

And again, take a close look at the bill and become familiar with it. I agree with Tracey completely. If you haven't looked at it lately you wouldn't remember all the details it goes into and it goes into significant detail.

I want to talk a little bit about the applicability of it, of 844 also, so we all have a common framework here. It applies only to passenger vehicle and light duty truck tires manufactured for sale in California.

There are some very specific exemptions in 844, which I have listed here. Again, I've condensed the language. I encourage you to look back at the more detailed explanation. But in

essence if 15,000 or less of a tire is made it is exempt. Snow tires are exempt, motorcycle tires, space-savers. You all recall that many vehicles come with these very small tires intended for use only as temporary spares. Tires less than 12 inches in diameter and off-road tires.

Now in some cases the legislation is very detailed, in some cases it is not. So even within those terms that I just shared with you we view this as an area where we are going to have to work together to make sure we have a common understanding of exactly what those terms mean. So for example something as simple as snow tires. Well, we're going to have to nail down what a definition of what a snow tire is. Unless you folks in the industry have a common definition --

PRESIDING MEMBER BOYD: Should you every say *nail* when it relates to a tire?

(Laughter)

MR. TUVELL: We don't want any flats here. But the point is that where the legislation did talk about such things as a snow tire we'll need to define that. Because, again, we're heading towards regulations here and the definitions are going to be very important. So we

want your help and assistance in providing us with the basis for these definitions. How do we make these definitions very clear and commonly understood, okay.

Do you have already within your industry very clear definitions of these terms that you see in 844 or the terms that we're going to have to come to agreement with as we move forward on 844 that we can use, that are going to work for us outstanding, okay.

Do we need more detailed definitions? Please come forward with those also.

And let me focus on number four here for a second. I probably didn't state this nearly as clearly as I'd like. How many tires are we dealing with? Distinctly different tires. I'm not talking the volume of tires sold in California.

But when we talk about the need to get ratings systems that apply to all passenger vehicle and light truck tires sold in California, how many are we talking about for each manufacturer? Is it 10,000, is it 20,000, is it 50,000? Help us come to grips with the size of this so we can get a sense that in the case of

Michelin we're talking about X number of tires. Distinctly different tires that would fall within the category of passenger/light truck and for each manufacturer so we can start getting our arms around this thing, okay.

And I used the term also, family. Help us with the understanding of that. I realize that in many cases a tire manufacturer will manufacture a product whose only difference is possibly the name of that product. Then you would supply that to one company as the Concord model X or the Atlas Model C or something like that. So if that brings the number of tires into a smaller category because the only difference is the name of it we need a better feel for that too, okay. So we need your help in that area, please.

Let's talk a little bit about the Phase 1 goals. In the notice we talked about the different phases the way we view 844 so I encourage you to look back at that. Yes, it is principally the information aspect of 844 as Tracey pointed out so it's a similar thing. I'm calling it Phase 1 but it is the information side of 844.

We're looking at this as breaking down

into four separate components, you can say. Let's look at the first one. Maybe we'll reach a consensus today.

For a proposed rolling resistance test protocol. I believe everybody I've talked to and the sense I've gotten from the industry all along is the J1269 force method, single point, standard reference conditions. So now is the time that we would like to get back from you your feeling of that in writing. Yes, Don.

MR. AMOS: Why the force method?

MR. TUVELL: Well that was the method that we used in the Smithers tests.

MR. AMOS: It's okay but there are other methods that are just as -- Okay, Don Amos from Continental Tire North America. The question was, why specifically the force method for J1269?

MR. TUVELL: Sure. There may be a misunderstanding on that, Don. In the case of -- in all of these, and I'll go over the questions right now. Just please come forward with the issues you have or the concerns or the areas of clarification that we need to deal with on this, okay. It doesn't have to be specifically the force method.

MR. AMOS: Okay. The 1269 references several acceptable methods.

MR. TUVELL: Yes.

MR. AMOS: Okay. So as long as we say 1269 and leave it go at that you could use, you would be free to use whichever method you had, your laboratory was equipped for.

MR. TUVELL: Well I think what I want to entertain here is a dialogue where we can ensure that in the end we're going to have consistent results that we can compare from test to test to test, whoever is doing the test, whichever method they're doing it with.

MR. AMOS: Yes.

MR. TUVELL: So if somebody is doing the force method or somebody is doing another, we need in the end comparable information.

MR. AMOS: That is what the SAE has already done.

MR. TUVELL: Okay.

MR. AMOS: That's why it's in the 1269 as a standard, because these things have been compared that they are comparable.

MR. TUVELL: Okay.

MR. AMOS: They produce the same result.

MR. TUVELL: Okay, very good. So here in the area then of the rolling resistance test protocol are the questions that we would like you to respond to: Is it acceptable or not, okay.

How do we ensure that the test results from various labs and testing facilities are going to be comparable? What steps are we going to have to take to do that, okay?

What are the costs of getting these tests conducted, okay?

And are there sufficient test facilities and to what extent do they exist?

This is all information that we would like you to be able to respond to us with information on. We are not aware, for example, the extent of testing capabilities within the existing tire manufacturing industry or independent labs. So this is an area where we would really appreciate you in response to the workshop today to provide us with additional information.

MS. NORBERG: Ray, just a point of clarification. Are you looking for comments within two weeks on all of these questions or just as part of the dialogue? Or are you expecting

dialogue today on all these questions? We're just trying to understand what you expect.

MR. TUVELL: No, obviously. I mean, the principal dialogue that I was interested in today is that anything I can do to clarify the questions. But I wasn't expecting to hear from you today a complete response, absolutely not. This is the first day that you have been introduced to these.

We had set out December 21 in the notice as the day we would like to get complete reaction to today's workshop. Now if you don't believe that is sufficient then I think you need to bring that to the attention of the Committee and we can discuss the possibility of additional time.

MS. NORBERG: I mean, just from the tire industry perspective we really do want to provide meaningful comments to this process. When we saw in the notice that we were looking for written comments on the workshop it's just very difficult to prepare this in advance without questions.

I would just enter to ask to entertain the idea of a little bit of extra time, especially given that it is the holiday season. We are not trying to delay by any means but certainly we just

want to not have the quality of information provided short-circuited at all.

PRESIDING MEMBER BOYD: Point well-made, point well-taken. If anybody has any comments on an issue today that might help us resolve the issue right here and now please spring to the microphone, to the extent more time is needed or time is needed to respond.

MS. NORBERG: Well maybe it would helpful. I think at least from our perspective there is consensus in the industry and there sounds like there's consensus among other groups that 1269 is the appropriate test.

I'm not sure the goal in collecting additional information, you know, we'd be happy to answer the questions. But if there is agreement here today I'd suggest let's all agree to agree if that would be a possible outcome of the discussion.

PRESIDING MEMBER BOYD: That's fine by me. I mean, I've already kind of heard that under the umbrella of what is J1269 there are acceptable protocols. It sounds to me like that question was answered, unless I'm missing something.

The question of compatibility between

labs, I don't know. Does anybody have any comment on that or is that a subject we should get some written comments on?

And last but not least, any of the issues that Ray is bringing up, which this is just the staff bringing them up for consideration. If any of these issues you decide, some of you decide are fairly knotty and might deserve, you know, a staff workshop of their own, please let us know. If not today in some written submission.

Even I jumped at what are the test costs. I even wrote in the margin of mine the relevance of that. But I was reminded by Susan that unfortunately in the rulemaking process we have to give some indication of what we propose costs folks. So I guess we will have to collect some cost data of some form.

MS. NORBERG: I guess, if I can -- On the issue of test protocol. When you go back to the statute the test protocol is specifically first mentioned when it talks about establishing the database of a representative sample of tires. So it seems to me at this point in choosing a test method the goal is to be able to get to that database.

And certainly once you commence the final rulemaking there will be other pieces that need to be added. But at this point at least if we could make that threshold decision and move on with, you know, creating that database, analyzing the data, it would not slow the process down at this point.

PRESIDING MEMBER BOYD: Okay.

MR. TUVELL: And I hope that none of these questions I'm bringing up are viewed as ones that would slow the process down, okay. But I think that one of the points that I would like to try to stress here is because we're talking about ultimately getting into a rulemaking proceeding it is not just a matter of us coming to an agreement today and everything is fine and off we go.

We are going to have to nail down in detail and with the detailed language necessary exactly what is 1269 and any other detailed qualifications we have to add to that so that the rule is very, very clear. Otherwise it will be rejected, okay. So I am bringing these things up as this extra level of detail that we'll have to nail down through the process.

But I don't see it as a show-stopper.

I'm not after a show-stopper.

MS. NORBERG: Yes, just a question too on the sufficient test facilities question. I am not sure if you're asking for overall compliance questions. I'm not sure what the goal in that is.

MR. TUVELL: It's very simple. We would like to know the test capabilities that exist, okay. Is this going to be an issue or not? And certainly we don't know in any individual company your capability to do testing.

MS. NORBERG: Okay.

MR. TUVELL: I suppose I could do some surveys to find out what exists in private industry. Maybe that would be simpler. But to know what your individual companies could do, I think it would be easy for you to come forward.

MS. NORBERG: I think the difficulty is you've got sort of the cart and horse program. Sufficient test facilities. If we're talking about how the industry currently does testing, you know, for every federal requirement, for safety, durability, consumer information, anything. It is all self-certification where companies do their own testing in their own labs.

So if that's what we're talking about,

the companies represented here either have testing facilities or a 1269 in their own company or contract out to a third party lab to do that testing. So we have a combination of mostly private facilities, private companies, that do their own internal testing and there are two companies in the country that do third party testing. Smithers, which you used, and STL. So it's pretty -- That's it, it's a pretty small universe at this point.

MR. TUVELL: Okay.

MS. NORBERG: But I think, you know, sufficiency is an interesting question because we don't have a program established. So, you know, sufficient to what is sort of an open question and difficult to answer at this point.

MR. TUVELL: Well, please view this as we're still at the information gathering stage, okay. And that I don't -- Now is the time to ask these questions and hopefully the information will be coming straightforward.

I don't want to have to wait until we have a, quote, program, to ask the questions and to try to get a grasp of the information. And that's the purpose of laying out the questions

today. And again, I apologize that we have not had an opportunity to get these questions in your hand earlier. So if we had not set aside sufficient time for you to respond to them, again, I mean, please give us a better indication of how much time it would take.

MS. NORBERG: I would say sufficiency would be difficult to tell you prior to understanding what the program may contemplate.

MR. TUVELL: Well no. I mean, this is more basic. It's kind of like -- Maybe it's my choice of words here in this question number four, sufficiency. What is the volume? I mean, how many tires could be tested over what period of time? Okay. Just so we get a feel of it.

PRESIDING MEMBER BOYD: Luke, did you have a question? And there are other microphones here. You're welcome to just grab a seat and sit down. Tracey, maybe you'd better sit.

MS. NORBERG: Yeah, I'm in the hot seat a lot.

PRESIDING MEMBER BOYD: You may be here awhile.

MR. TONACHEL: Luke Tonachel from NRDC. I guess I just wanted to -- I hope this is helpful

clarification but I guess what we should be thinking about is not just, you know, what we need here to establish a representative sample database but also we need to get a sense of, if we get to a point -- you know, when we get to a point that we need to report this information for every tire model that's out there. And Ray asked the question earlier, how many tires does that mean. That facilities are in place to do that.

So I guess the point I'm trying to make is, let's not think about this just as what we need to do to get the test database or the sample database in place but what it is that we need to do to actually, once we're in a reporting mode. I don't know if that's helpful or a different perspective from what you were coming from.

MS. NORBERG: Yes, I think that is helpful. But I guess the challenge is what kind of, what kind of reporting structure would it be and what would be the requirements. Because that's really hinged on whether or not the capacity is sufficient.

PRESIDING MEMBER BOYD: I hear that statement and what's going through my mind is that this is an example of the kinds of questions

you're probably going to have to have a discussion about as, you know, once a rule is roughed out to some degree and you start having your dialogue back and forth.

It may be very easy for you to, so to speak, certify that we have adequate test facilities to meet the deadlines and the criteria, with respect to the criteria you were given, you're suggesting, et cetera, et cetera.

I guess it's a fair question, I don't know. Based on the discussions you've had here I guess it's kind of simple, a simple question. And I'll take Ray at his word as saying he's just throwing out some of the questions that the staff feels would have to be addressed in one form or another in formulating and ultimately getting approval of a regulation.

MS. NORBERG: And I think maybe it would be helpful if we could sort of prioritize what things might be subject to this 14 day comment period that would help us get to the next step for the next session in the dialogue, versus things that might be more mid- or long-term information needs. You know, we'd be happy to work with everyone. But I think in terms of trying to look

at getting the process to move forward it would be helpful to sort of prioritize and set time frames so that the next time we meet we have the right information.

MR. TUVELL: Well, could I then in turn then request that from you. I mean, as part of the comments that you would submit to us give us your suggestions on prioritization.

MS. NORBERG: Absolutely.

MR. TUVELL: I'm wide open on all of this stuff. I mean, if there is one message I can get across, we are wide open at this point. There is no sequence, you know, or order of this, you know. The questions you could add more now, you know, or whatever is necessary to get the clarification, okay. This is the beginning of the dialogue, the beginning of the process.

Okay, reporting requirements. At this point it is our desire to get this level of information on all the tires that would be reported to us. Basically it is our general belief that certainly up to this point this is commonly available data that you have all the time, okay. And it would only be this additional data that would result from any testing.

So the questions that we have: Is, in fact, is this commonly available data? Because I'm concerned that we would be talking about here, are we placing a burden on you in some way, shape or form to develop information that you don't already have.

Do you have some precedence on preferred data reporting that you have used before in your industry such as with NHTSA that could serve as a good model for us? Do you already have this stuff in a form that all you have to do is click the button and send it to us when you send it to everybody else? Great, I'm open to it. What do you have that exists already?

And also, are there any foreseeable reporting problems that need to be considered? Now the concept that we have here is very similar to the concept that we have with any appliance reporting or anything else that re regulate where we would establish a template that any company subject to the regulations could get access to electronically. You just drop the information into the template, you e-mail it back to us. We go through some basic reviews of the data, make sure it's correct, it's complete. There may be

some interaction there.

At some point then we would accept all the data as being, yes, this data is correct, and then it would be made available in a usable form for future use. Either for additional analysis, distribution to anybody who wants it, use in an interactive website. There's many different concepts that we have and ultimately what would we do with the data once we have it.

But right now my focus is getting your feedback and your ideas and your suggestion on the mechanisms by which we want to transfer this data and also the data that we're requesting.

Rating system. It's unanimous. None of us have a great idea yet on a rating system so we don't have an idea where I'm saying, here is a proposal on it. So I think we've all sort of, who have spent time on this, stepped back and said, this one we need to work closely together on because it's not apparent yet that there is an existing system out there that serves as a good model. If you believe there is please share that information with us.

Certainly this matter of consumer friendliness. And I say *consumer* but I think it

was pointed out by others that there is a consumer in the purchase decision, there is a seller in the purchase decision. Both of them have significant influence over that transaction.

So we're talking about the need to have a rating system that makes that process work well to get more of a focus on energy efficiency as a consideration in the purchase decision. So the seller is going to have to be comfortable with it and how to transfer and provide that information to the purchaser. The purchaser is going to have to be comfortable with it in understanding what it means, okay.

And I especially -- I've talked to a few of you. I especially think that this one is one where we're going to think long and hard about this. Alan has talked about the concept of labeling. And I think to some extent earlier today when we were talking about this there was a little bit of a semantical problem going on in that some people were saying *labeling*, some people were saying *rating*.

I look at it as the rating system is how do you start talking? How do you translate the technical information on energy efficiency into

some easily understood concept for consumers? How do you do that? That that's the focus of the way I'm using the term *rating*. It is not ultimately what sort of paper you print it on or do you slap it on a tire or anything of this sort. It's more like, what is this concept anyway and how does it work?

My point four here. I've heard the term *bins* or *categories* and I think that's a common thing. Is it A, B, C, D? A, B, C, D, E? A, B, C, D, E, F, G, H or, you know, one star, two star, three star? How many do you break this into, how few do you break this into? Please. And I mean, these are clearly areas that need some open discussion and common understanding and maybe some ideas on how can we do some testing of different concepts here to get out ahead of this thing so that we have a higher level of confidence of what would work and what wouldn't, okay.

Part of this also has to do with the fact that, well, we're reacting to data that we have. So there is going to be a data limitation here in some way that you'd say, well that can only be divided up this way. Or the data is only so finely accurate that if you make it any smaller

than that it is meaningful relative to the data.

So there's a lot of different concepts here that I think are going to have to be taken into consideration as a part of the discussion of the rating system. But this one is wide open, this one is wide open. I have yet to see a concept yet that I'm saying, I think this is it. So please, we're very, very interested in opening a dialogue and getting ideas from everybody on this one. Yes, Luke.

MR. TONACHEL: Luke Tonachel from NRDC. I was just wondering. There seems to be that there are people in the world that are sort of expert at this typical, this topic. And I'm wondering if there's either resources or people have ideas of how to work with those people so that we can pull in -- I imagine there's people here at the Energy Commission through your other appliance efficiency standards that have some of this expertise. But whatever ideas there are in terms of tapping that.

ADVISOR TEN HOPE: I had the same thought to perhaps throw out. It seems like the kinds of points that you put up there are different categories. One is very technical in

terms of, what are the technical questions about what the standards should be or how far to push and what the testing protocols are.

And then you have two other sort of characters. One is this label and/or not label. The information and how it's conveyed. And I think there's a lot to be learned from appliance efficiency and, you know, other types of appliance consumer information that has been provided on efficiency. We heard some of it this morning and there's just a whole body of knowledge in that area.

And I would think an informational workshop that brought that expertise together and talked about how consumers perceive efficiency information, what's most powerful, what's most effective, would be -- it's a whole different thing than what should the technical standards be.

And the third area I think is the education from the dealer/consumer side. What's going to be effective for that interaction between dealers and consumers. And we don't much about -- I personally don't know much about what information would be effective in a dealer's hand in that conversation when a consumer is making a

purchasing decision. And that's a whole other area of exploration.

So you might think about having your workshops in those three different areas.

MR. TONACHEL: I think that your categories are right on. And I guess part of my question is, are there resources identified to bring in those experts or do we know who they are? Do we need to find out who they are? Are you asking us to come up with those people? That's my general question.

PRESIDING MEMBER BOYD: Well it sounds to me like Ray is asking you the audience for some suggestions in this area. As Laurie just indicated, we have expertise in other areas, not tires, but in this general arena that relates to building and appliance efficiency. I know Ray has actually talked to the staff there and there's probably additional information that can be derived from there.

Earlier in the day I was making notes here, particularly when Alan was talking, knowing some of his alliances, work alliances now about what kind of consumer reaction surveys are there other than those done by the manufacturers. I

know you all do it in order to know how to peddle your product, so to speak.

But I am just wondering if there are any other consumer -- well I know there are other consumer behavior surveys that have been taken that we could probably tap into to help design a program of reaching out to the consumers. But you the tire manufacturers are very skilled at reaching out to the public and touching them for selling them tires.

You probably have a lot you can contribute with regard to suggestions of how to pass on this new piece of educational material that is the net result of all these efforts to get in the hands of consumers as they make choices. So I don't know if it's that big a problem.

I don't know if the information -- I'm looking at Ray's slides now, whether they're way over-reaching in terms of the amount of information that is really needed. But it is, you know, his effort at getting an idea of what might be needed. I think I would put some of this as, this is what we think we need to have as you think about formulating the program. If you have other thoughts please let us know. If you think some of

this is going off the deep end please let us know. Or let Ray and the staff know.

I don't know if that helped any. I guess, Ray, you ought to plod on through your stuff because by the time you get done I think everybody is going to feel very weighted down. And then we have to sort through it all.

MR. TUVELL: I put myself late in the day so I could speed through this.

The final slide that I have has to deal with the question of verification and compliance. And it has been touched on to some degree with other speakers. Certainly when we get in the business of talking about rating systems and data gathering and making that information available to the public, in essence the government is putting its stamp on it and saying, you can trust this information, okay.

And so that puts us into the position now where we have to establish a mechanism where we can do verification and compliance. So these are the different concepts that we would be proposing as a part of a program that deal with that. So mechanisms whereby which manufacturers would submit information to us.

The Energy Commission getting the capability to do independent testing. And of course, if we were to do that, that would be through independent contractors for certain --

Then the ability to do random and selected testing where we could just pull something. You know, well we want to get some data on this. We're not exactly sure what's going on with that tire.

Or the challenge mechanism that has been talked about earlier where either a consumer or another manufacturer says, I don't know if I trust this data that is being presented here. We would like to challenge that in some way. So we then as an independent entity can respond by getting tests conducted in a fashion so that we can overcome any differences of opinion there.

And of course when we talk about the area of verification and compliance then I have a number of questions again that I would like your feedback and perspectives on. What should be the steps of such a process?

Should there be steps where if something were to come up we'd automatically get in contact with a manufacturer and say, you need to know

something, your product is being challenged. Get your data to us, prove it to us, something like that. What steps should be in such a process for verification and compliance?

If we get into a circumstance where in fact as a result of some testing we find, hey there is a problem here. This data isn't consistent. What we're finding through our tests is not consistent with what has been reported to us. Then if that's the case then what should the consequences be. It's not only the consequences in terms of what process would we use now to get things right but most certainly --

We want to get into a situation where we don't find ourselves being overwhelmed by the government's need to do verification and compliance. In other words, where somebody would say, what the heck, I'll just submit whatever data. It's up to them. The government is never going to catch up with me. There's 40,000 tires out there. By the time they get around to testing my tires, forget it, we'll be long gone.

Well, we don't want that to happen. We'll never be able to keep up. And so do we have to establish consequences right at the top and

say, hey look, make sure your data is good. Because if we find a problem this could be a consequence.

So give me your feedback on that. What do you think we should be dealing with in that area? Do we have something or not, what would be effective. Can we redefine the problem instead of saying, well there's a consequence, there's another action. I mean, if there's other words you would prefer to use that's fine with me too but you get the point, okay.

And I think Luke mentioned this and it is certainly a concern for us. We get in this business there's going to be costs associated with it and we're going to have to come to grips with that. So I put this out there as, you know, it's probably as much a question for us as it is for you. And so there's a cost issue that we're all going to have to come to grips with on running a program like this and the continuation of a program like this. None of this stuff is free.

So if you have any ideas on that or again you're familiar with other precedents on where this has been done before and how these types of costs and stuff have been covered then

absolutely. Now that one, that's the last of my slides.

Just let me sort of in summary say this. This is the opening of the dialogue. These are the first times we've had an opportunity to raise these questions, to get this public dialogue going, okay. This is the first, will be the first in a series of workshops, working groups, whatever it takes for us to get a clear definition of all the outstanding issues.

And setting up mechanisms where we can get it refined to the greatest extent possible, to come to concurrence on where we can, to come to consensus where we can. Or where we can't agree, a clear definition of what that is. So we can provide that information to the decision-makers as soon as we can possibly do that and get this information out there in a form where it needs to be out there in the marketplace and effectively participating in tire purchase decisions. That's where it needs to be.

And our charge is to come up with a program to do that. And the way this is going to succeed is with the active participation of everybody in this room and most certainly the

industry participants.

PRESIDING MEMBER BOYD: Would you like to react at all, Tracey?

MS. NORBERG: Well certainly we'll be active participants, I can promise you that. I guess overall, you know, just to sort of echo what I had shared during my presentation.

We would really advocate at this point that the Commission take a good, you know, a look at the statute itself and look at the order of things that are set out in the statute. Really looking at, you know, selecting that test method, getting the database done. Then do the rating system and then do reporting requirements. And I think the statutory language is pretty clear in terms of how to proceed with that approach.

I think it is very difficult when we're looking at, gosh, what would reporting look like when we don't know what the program is and vice versa. And I think that's why the statute is designed that way. It's really to take it in a stepwise fashion and say, you know, we need a test method, then we need data, then we need a rating system and then we need to figure out compliance.

So I guess overall it would be our

message to say, let's do it in that order. That makes sense, it's logical. And, you know, we're here to participate.

PRESIDING MEMBER BOYD: Okay, anybody else like to make any comments?

As I sat and listened to this I realized Ray put out everything on the table that one would think about as one was designing the entire overall program.

So I don't, I'm trusting we don't really intend to require the folks to respond by the 21st of December to all that just came out the door. I guess anything you might want to comment on, fine. But I think a little bit more in that time frame is just kind of what the general, overall theme of what we were trying to get at today would be appropriate.

I can't even in my mind draw a dividing line as to how far you need to go and how far you don't, you wouldn't have to go based on what I just said. So I'd say do the best you can by the 21st. Roughly frame some issues.

And from what I heard from Ray, a lot of this is going to have to be what is talked about as we move along. As he and the staff here think

about what they heard today and how they might distill things down as to what is really needed and what's not, and put it in the sequence of a logical order to proceed. And I must confess, the law does lay out an order that may prove to be the logical order in which to proceed.

We have to do it all by regulation, even -- I don't know if Caryn is still back there. I can't see her. Whether she bailed out a moment ago. She was there. But even as I understand it the test procedure we have to do, we have to choose -- We have to choose a test procedure in a regulatory way. So we have to grind that through even. And maybe we're ready to start that one and to get it on its way.

I would just like to acknowledge that I recognize in the audience some members of the Integrated Waste Management Board. They are referenced in the law as having a role here on this project and process, particularly as it relates to their specific responsibilities for managing waste in the state.

And tires are deemed a very unique and novel waste item in this state. Always a problem to all of us. I know the staff will be working

with them more in the future on this issue. And I must acknowledge that they helped pay for the Smithers study so they're stakeholders and they have an investment in this process.

Ray, anything else? Luke? And anything else anyone else has to say. Because I'm a little overwhelmed myself so I won't have a lot more to say.

MR. TONACHEL: Luke Tonachel from NRDC. Just going back to one of your opening comments, Commissioner Boyd. In terms of people get what they can to you by the 21st. I wondered if you could maybe give us a sense of, the staff is going to absorb that information and then -- and maybe what some people should be submitting are ideas for which working groups are necessary.

And then I wanted to get an idea of when maybe we would know when the next meeting would be scheduled and probably the topic of that meeting. If it's going to be a working group meeting on the test procedure or whatever it is. That would be helpful to know when we're going to find that out and start getting the right people together, that sort of thing.

PRESIDING MEMBER BOYD: A good point. I

think one of the questions Ray put forward is what areas do you think are going to be difficult versus what areas appear to be very easy. I'm walking away from this thinking that the test procedure area is fairly well reconciled. Maybe some folks need to get together one more time to wrap that up but I think the point is well taken.

What I said at the beginning and what I'm feeling now is I'd like to see the staff digest what they heard today and develop some kind of sequential time table for dealing with the issues that need to be dealt with to complete this process and this project. And I think that would then need to be shared with you all.

And in the process of formulating those ideas perhaps the staff -- and perhaps with the benefit of what you turn in on the 21st, whatever that might be, can break it into the categories where there may well have to be a gathering of folks in the form of a working group or a formal/ informal workshop, or just working group discussions on various issues.

I don't think it's appropriate to have too many workshops like this on lots of small points that need to be resolved, that can't be

resolved just through interface of all the stakeholders in informal meetings.

You look poised to want to say something.

MS. NORBERG: Thank you, Commissioner Boyd. I guess what my thoughts, if I could be so bold. In terms of what we might be able to get to all of you by the 21st are some overall perspectives. Maybe some that we shared today and maybe some beyond that, on how the process should proceed and how we view it.

You know, in terms of formal, working groups versus workshop topics. My initial thinking is that maybe it's more right for workshop topics.

I think in my experience on this issue and many others in the tire industry, it tends to be when we try to do working groups it ends up looking suspiciously populated, like every other working group. Because of staffing, you know, it's pretty much the same people that show up I guess is what I'm saying. So topics might be the more salient point because we might need to just bring in additional expertise. But the core group I'm guessing is probably pretty similar to

everyone who came today.

PRESIDING MEMBER BOYD: I think the core group is sitting in this room.

MS. NORBERG: Yes. I guess, you know, we'll always be here.

PRESIDING MEMBER BOYD: And I tend to agree with you about the idea of creating separate working groups versus just identifying the topics that need to be addressed and any and all can have at them in any meeting that's called to discuss them. They don't have to be nor will they be formally called workshops like this. I'd certainly agree with that. Okay.

ADVISOR TEN HOPE: Commissioner, I just -- You want to close.

PRESIDING MEMBER BOYD: No, no, go ahead.

ADVISOR TEN HOPE: My sense is when we went into this that we were thinking that all these topics would be discussed and have some general sense of the scope of all of these questions and then begin rulemaking.

And what I hear proposed is that we're really close on the test protocol and the database and we could start the regulations on those, and

then move into the other topics. Am I hearing that correctly?

MS. NORBERG: You know --

ADVISOR TEN HOPE: That you really want to chunk this in terms of that phase, put that to bed, next phase.

MS. NORBERG: To be honest, you know, I'm not sure of the utility of having a separate regulation on the test protocol other than that it becomes part of the, you know, the basis for the regulation on the rating system and the compliance mechanism. That's just my perspective. I'm not sure what it would gain us to have, you know, a formal regulation with the test method ahead of the schedule.

And the database, my sense in reading the legislation is that it is a tool to use in order to create the rating system. It's not, you know, it's not an end product in and of itself.

PRESIDING MEMBER BOYD: Yes, we have struggled with that. We thought we were going to have to work our way around that provision in the legislation. It is not an entity in the same form as the other issues that are listed in the law.

We were discussing this earlier this

week on how to just fold that in somehow or another and comply with the intent of the legislation but still recognize it's not -- you don't put a database in a regulation so to speak.

MS. NORBERG: I mean, the way I read the law it's really just telling you, they're telling you what the sufficiency of data might be in order to create the rating system, versus it being a regulatory requirement, you know, that would manifest itself in regulations.

PRESIDING MEMBER BOYD: Anyone else have any other comments, thoughts? Ray, anything more you're cogitating on? All that you've heard.

MR. TUVELL: Nothing else from me. A lot of work ahead.

PRESIDING MEMBER BOYD: Okay, I will thank everybody. Thank you for being here on a Friday. I know it inconveniences lots of folks, especially those of you who have to go east. It's already late in the east. Enjoy your night in Sacramento if you're presuming to say.

We look forward to seeing you in the future. Not too many times, but seeing you in the future on this subject. And hopefully we've launched this now on its last, the last sailing

trip for this project.

Luke, you were in the Navy. What kind of naval analogy should I be making?

Thank you everybody.

MR. TONACHEL: Let's just say we're not trying to turn a tanker, we're in a speedboat at this point.

PRESIDING MEMBER BOYD: All right. And no more glacial alacrity.

Thank you everybody, good night.

(Whereupon, at 3:30 p.m., the Committee Workshop was adjourned.)

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CERTIFICATE OF REPORTER

I, JOHN COTA, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Committee Workshop; that it was thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said workshop, nor in any way interested in outcome of said workshop.

IN WITNESS WHEREOF, I have hereunto set my hand this 17th day of December, 2007.

JOHN COTA