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Greenhouse gas emissions trial ends

By Candace Page
Free Press Staff Writer

May 9, 2007

Automakers leveled a final blast at California's greenhouse gas emissions limits Tuesday, ending a 16-day trial with a stinging, multimedia indictment of the regulations, the regulators who drafted them and witnesses who defended them as technically and financially feasible.

In a shorter, less forceful closing argument, the state of Vermont asked U.S. District Judge William Sessions to uphold the rules, which require automakers to reduce emissions from passenger cars by 30 percent in 2016.

Vermont and 11 other states adopted California's greenhouse gas limits as a step to address global warming. Automakers have challenged the rules in at least three federal courts. Vermont's is the first case to go to trial.

Sessions questioned both sides persistently during their closing arguments. He showed great interest in whether the U.S. Environmental Protection Agency -- which must approve California's emissions limits before they can take effect -- has legal authority to resolve the dispute by changing the rules or giving automakers more time to comply.

"It is fair to say judges are not the best people to decide what (auto) companies can do or can't do," Sessions said at one point.

He allowed the two sides 30 days to file post-trial briefs and gave no indication when he will issue a decision.

'Potentially devastating'

The legal core of the case is whether the California greenhouse gas limits are fuel economy standards in disguise. The federal Energy Policy and Conservation Act forbids states to set fuel economy standards.

California's regulations require reductions in greenhouse gas emissions and don't mention fuel economy. But most automobile greenhouse gases are the result of burning gasoline -- burn less gasoline, emit less carbon dioxide. Witnesses had testified the 30 percent reductions required by 2016 amount to a fuel economy standard of 43.7 miles per gallon for passenger cars.

"Simply put, these regulations are fuel economy standards ... fuel economy standards with potentially devastating consequences," Andrew Clubok, lead attorney for the auto industry, began his nearly two-hour closing argument.

On wide-screen monitors in the courtroom, Clubok flashed e-mails exchanged among California regulators, acknowledging their rules amount to fuel economy standards and reminding one another to avoid those words.

"There is something disturbing about public regulators trying to find a way to hide what this regulation is about," Clubok told the judge.

Vermont Assistant Attorney General Scot Kline disagreed with Clubok's legal argument.

"The Vermont regulations regulate greenhouse gas emissions to deal with climate change," he said.

He noted the regulations apply not just to tailpipe CO2 emissions, but to other greenhouse gases that leak from car air conditioners. He cited testimony that air conditioning improvements could get some fleets 15 percent of the way to compliance. Biofuels and diesel fuels also emit less CO2, "providing another path to compliance," he said.

Clubok pooh-poohed the notion the California rules will have any impact on climate change, describing them as "purely symbolic" and citing testimony that their effect would be barely measurable even if adopted worldwide.

Thousands out of work?

Even if Sessions finds no explicit bar in federal law, the auto industry lawyer then argued, the regulations conflict so greatly with the goals of the federal fuel economy law that they are, by implication, pre-empted by that law.

The federal law directs the Department of Transportation to balance desired improvements in miles-per-gallon with the need to save American jobs, retain auto safety features and preserve consumer choice.

Clubok then summed up the automakers' factual case, flashing computer graphics, clips from video depositions, even a video of congressional testimony on the monitors.

"It's simply not correct to say some companies can easily meet the standard," Clubok said, calling up a multicolored PowerPoint graph.

The graph showed fleet fuel economy creeping up at 1 percent or 2 percent annually in coming years. At a 1 percent annual rate of improvement, automakers would need until 2031 to 2057 to meet the California limits, according to the graph.

Instead, automakers like General Motors and DaimlerChrysler will have to stop selling lower-mileage cars and light-duty trucks in Vermont, California and the other states, with devastating effects on car sales and jobs, he argued.

"You've got potentially tens of thousands, perhaps hundreds of thousands, of people who will be out of work because of these regulations," he said, an impact California simply ignored.

In response, Kline argued that the automakers' expert witness, whose calculations showed the impossibility of improving fuel economy sufficiently by 2016, made assumptions that might be incorrect.

"He puts in assumptions and ends up with a calculation that (these automakers) will leave the market. That ignores the external reality of what's happening in the real world," Kline said. He said, for example, DaimlerChrysler has put Chrysler on the market, so no one knows for sure what compliance strategy the company will use in the future.

'In public view'

Kline's argument hung on the conclusions of the state's expert auto witness, K.G. Duleep, who testified that car companies already have the technology to improve fuel economy sufficient to meet the 2016 standards, at a cost of about \$1,500 a car.

Clubok attacked the credibility of Duleep's data, analysis and conclusions, pointing to testimony by experts in the field that Duleep's work was full of errors and was carried out with deeply flawed analytical methods.

Sessions also appeared to have questions about Duleep's reliability.

"Do other experts use this macro approach as opposed to the more detailed approach" used by the auto industry expert? he asked.

Kline said he could not respond on the spot but would review earlier testimony he believes provided evidence that Duleep's methods are used by others.

Automakers have filed motions to have some or all of Duleep's testimony thrown out, a result that would be a blow to the state's case.

On the trial's final day, Sessions praised both sides for agreeing to edit confidential business information out of all the documents submitted in the trial -- thus avoiding the need to shut the public from the courtroom during testimony on that confidential information.

The Burlington Free Press had intervened in the case to keep the courtroom open.

"It allowed both sides to produce their evidence in public view," he said of the agreements reached by the two sides.

Contact Candace Page at 660-1865 or e-mail cpage@bfp.burlingtonfreepress.com



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Auto emissions case wraps up today

By Candace Page
Free Press Staff Writer

May 8, 2007

A 16-day legal battle over whether Vermont can regulate greenhouse gas emissions from cars and trucks is scheduled to wrap up today in U.S. District Court in Burlington, as lawyers for the auto industry and the state offer their closing arguments.

Automakers contend the regulations, written in California and adopted by Vermont and 11 other states, are illegal and technologically impossible to comply with. The rules require a 30 percent reduction in greenhouse gas emissions from passenger cars by 2016.

Monday, the auto industry recalled Tom Austin, its independent expert on the feasibility of compliance, to rebut testimony last week by the state's expert on those topics, K.G. Duleep.

Duleep had told the court that car companies could reduce emissions to meet the limits by adding cost-effective technology to their cars, and by building more hybrid cars, reducing air-conditioning leaks and other steps. Drivers would pay an average \$1,500 more for a car as a result, he had said.

Austin had earlier told the court that automakers did not have the technology in place to comply by 2016. Even if given a longer time line, he had testified, the cost of compliance would range from a few hundred dollars for some auto companies' light trucks to more than \$5,000 for General Motors cars.

Monday, Austin criticized Duleep's methods of analysis, saying he believes Duleep used faulty pieces of data, compounded by methodological flaws, leading him to overestimate carbon dioxide reductions to be gained from new technologies and to underestimate costs.

The two sides are scheduled to present one more round of dueling experts today and then sum up their cases orally. Judge William Sessions has given the two sides until June 8 to submit post-trial briefs.

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Leading expert on climate change supports Vermont case

By Candace Page
Free Press Staff Writer

May 4, 2007

NASA's top climate scientist testified Thursday that motor vehicle greenhouse gas emissions limits like Vermont's are one essential step if the world is to avoid the potentially catastrophic effects of global warming.

"The bottom line is, humans now control the global climate," James Hansen, director of NASA's Goddard Institute for Space Studies and one of the world's best-known climate scientists, told U.S. District Judge William Sessions.

"We need to make use of (the technology) we have now to keep global warming in a range that avoids ... dangerous effects," he said. The Vermont limits are consistent with that goal and make "enormous sense," he added.

Hansen testified as a private citizen on behalf of Vermont in a suit brought by the auto industry seeking to overturn the state's adoption of a California regulation that requires a more than 30 percent reduction in carbon dioxide emissions from passenger cars by 2016.

The physicist turned the fifth-floor federal courtroom in Burlington into a climate classroom for much of the afternoon, leading the court through the basic science of global warming.

He described the accelerated rate at which global average temperatures are rising -- about 1 degree Fahrenheit in the past three decades -- due to human-caused carbon dioxide emissions. Eighty percent of the rise in atmospheric CO2 can be attributed to burning fossil fuels, he said.

Carbon dioxide in the atmosphere traps and holds heat radiated from the earth's surface. While 1 degree sounds like a small temperature change, Hansen noted the global average temperature was only 5 degree Celsius colder during the last ice age.

"Two to three degrees (Celsius) of global warming really makes a different planet," he said.

Today, the atmosphere contains about 380 parts per million of carbon dioxide, he said, a level not equaled in the past million years.

Headed for a 'tipping point'?

The danger, he said, is that 2 to 3 degrees Celsius of warming would trigger disintegration of massive ice sheets in Antarctica or Greenland. If ice sheets melt, he said, that could cause a 25-meter (82-foot) rise in sea levels. America's East and West coasts would drown, and low-lying countries like Bangladesh would be under water, he said.

"It's hard to say what is the straw that breaks the camel's back" when it comes to CO2 emissions and a warming climate, he testified.

On cross-examination, exchanges between auto industry attorney Andrew Clubok and Hansen became contentious at times, with Clubok repeatedly insisting on yes or no answers.

"But what if a yes or no answer leads to a misleading impression?" Hansen asked at one point.

Clubok challenged Hansen's "tipping point" theory as out of the scientific mainstream, drawing out that it has not been adopted by the Intergovernmental Panel on Climate Change, a group made up of scientists from around the world.

Clubok compared the scientist's picture of a possible 25-meter sea-level rise with the 18-centimeter (7-inch) sea-level rise predicted for this century by the IPCC.

Hansen responded that the IPCC scientists did not include any ice-sheet melting -- the major source of sea level rise -- in their calculations because no one yet knows how to model such melting.

Clubok also hammered on the fact that the California auto emissions regulations, even if extended to all countries in the world, would have little effect on global temperature, one- to two-hundredths of a degree.

Hansen rejected Clubok's adjective -- "microscopic" -- but said the effect would be "small."

"But even a small change is potentially important because of the nature of climate change," he said. He noted that a quarter of the CO2 released into the atmosphere today will remain there for 500 years or more.

The regulations are also just one of the many steps that must be taken to control human-induced CO2 emissions, he said, control that will mean finding replacements for the gasoline engine later in this century.

State's expert challenged

Earlier in the day, attorneys for the two sides clashed over the testimony of another of the state's witnesses, K.G. Duleep, an independent expert on the auto industry. Duleep testified Wednesday that automakers have sufficient technology to comply with the California limits without adding more than \$1,500 to the cost of a car in 2016.

Industry lawyers indicated they will ask Sessions to throw out some or all of Duleep's testimony, on grounds he has not fully disclosed the sources of his information and the operations of his analytical model.

Under cross-examination Thursday, Duleep testified he did not consult with engineers or executives at auto companies about the accuracy of the data he used in his analysis, the credibility of his results or the feasibility of carrying out the motor vehicle technology improvements he analyzed.

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Vermont launches defense of greenhouse gas rules

By Candace Page
Free Press Staff Writer

May 2, 2007

Vermont's greenhouse gas emissions limits on cars and trucks won't end global warming, but they are part of the Green Mountain State's attempt to do its "fair share," the state's opening witness testified Tuesday in U.S. District Court in Burlington.

"I don't think anyone thinks this will solve global warming, but ... when combined with other efforts at the national and international level, these reductions can be significant," state air pollution regulator Thomas Moyer told the court. "Basically, Vermont is trying to do its fair share."

Automakers are seeking to have Vermont's adoption of California's greenhouse gas limits thrown out on grounds they violate federal law and are technologically and financially impossible to comply with.

The rules would require a 1 percent to 2 percent reduction in greenhouse emissions in 2009, increasing to a 30 percent reduction by 2016.

After 10 days of witnesses for automakers, Vermont and its allies -- the state of New York and several environmental groups -- began their defense Tuesday.

Moyer testified that motor vehicles account for 45 percent of all greenhouse gas emissions in the state, and thus are a proper focus within Vermont's broader effort to reduce emissions from all sources.

"Greenhouse gas emissions that contribute to global warming pose significant health, environmental and economic threats" to the state, he testified. Moyer is chief of the Mobile Sources Section of the state Air Pollution Control Division.

He also said the state was bound to adopt the California limits because federal law gives states a choice: abide by standards in the federal Clean Air Act or precisely copy California's generally tougher pollution standards. Vermont chose in 1996 to follow California and has done so ever since.

Moyer said the state did little independent work on the greenhouse gas limits, instead relying almost entirely on California regulators' analysis of the feasibility of the standards, the cost of compliance and impact on consumers. In Vermont, he

said, the limits are expected to add about \$100 to the cost of a new car in 2009 and about \$1,000 in 2016.

Under cross-examination by auto industry lawyer Andrew Clubok, Moye acknowledged that automakers do not have sufficient off-the-shelf technology now to comply with the 2016 standard.

"You never told the public that the automakers will have to use technology that is not in production now?" Clubok asked. Moye agreed.

Earlier, responding to questions from Vermont Assistant Attorney General Scot Kline, Moye said under the rules an automaker that can't comply in a specific year isn't held accountable for five years afterward, during which time the company could make up for its failure by doing better than the standard in other years.

He denied automakers' contention that the greenhouse gas emissions limits are fuel economy standards in disguise, although he conceded under cross-examination that reducing fuel consumption will be necessary to comply.

This addressed one of the automakers' key legal arguments, that the Vermont regulations are illegal because only the National Highway Traffic Safety Administration has authority to regulate fuel economy.

Moye and the state's second witness, alternative-fuels expert Michael Jackson, both discussed non-fuel-economy strategies automakers could use to help them meet the limits.

Moye cited reduction in leakage of greenhouse gases from car air conditioning. Jackson outlined the benefits of ethanol and diesel fuel, both of which contribute fewer greenhouse gases than gasoline if one factors in the emissions caused by producing the fuel in the first place.

Under cross-examination, Jackson outlined significant barriers to supplying E-85 fuel -- composed of 85 percent ethanol, 15 percent gasoline -- in Vermont. Service stations would face a high initial expense in installing tanks for the fuel, and might have to charge a price for ethanol that consumers would be reluctant to pay, his testimony indicated.

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Automakers conclude case against greenhouse gas emissions

By Candace Page
Free Press Staff Writer

May 1, 2007

Automakers concluded their case against Vermont's greenhouse gas emissions limits Monday, calling a final witness who said the limits were built on a fatally flawed analysis by an independent consultant and California regulators.

New engine technologies cannot deliver the emissions reductions promised by regulators, General Motors engineer Kenneth Patton testified in U.S. District Court in Burlington. Patton spent the day on the witness stand, delaying the start of Vermont's defense of the rules until today.

Automakers are seeking to overturn Vermont's adoption of requirements written in California that call for a 30 percent reduction in carbon dioxide emissions from cars and light trucks by 2016. Reducing carbon emissions requires building cars that burn less gasoline.

When it adopted the rules, the California Air Resources Board said compliance was technically feasible, based on vehicle simulation models performed by an automotive technology company. The company, AVL, ran computer models of the effects of adding new fuel-saving engine and transmission technologies to vehicles.

Patton leads a GM engineering group that works on advanced engine design. He said the analysis done by AVL contained "major mistakes." California regulators compounded the errors by misusing the AVL study, he said.

"Gov. Schwarzenegger has said California has given the auto industry a recipe for compliance. Do you agree?" auto industry attorney Andrew Clubok asked Patton.

"If this is a recipe, it's a recipe for disaster," Patton said.

One major fuel-saving strategy modeled by AVL was smaller, turbocharged engines that would burn less gasoline while maintaining power and performance.

Patton said AVL's model showed that vehicle performance would suffer in ways that matter to motorists -- including how quickly the vehicle can accelerate from a stop.

In the case of a minivan used in the model, an unmodified van would travel 15 feet in its first 1.5 seconds of acceleration. The minivan with the "downsized" engine would travel less than 9 feet, he said.

"This is not acceptable," he said.

"If you are making a left turn across traffic, you need to get across that traffic in a way you feel is safe and comfortable," he said. The diminished performance of the smaller engine "is not acceptable" to car buyers, he said.

The downsized engines also did not accelerate as quickly from 50 to 70 mph, as motorists do when they are passing other cars, and required more downshifting when climbing hills, Patton said.

Among other flaws, Patton said, California regulators double-counted some of the fuel savings delivered by combinations of technology improvements.

On cross-examination, New York Assistant Attorney General Simon Wynn drew an acknowledgment from Patton that the California limits do not mandate use of any specific fuel-saving technology -- car companies are free to find their own solutions.

He quizzed Patton about a variety of engine improvements under development or ready for production at GM and other automakers, according to news reports and company press releases.

Patton echoed earlier automaker witnesses, saying most of those technologies are not ready for installation and would not provide the fuel economy improvements needed to meet Vermont's standards.

Contact Candace Page at 660-1865 or e-mail cpage@bfp.burlingtonfreepress.com

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Automakers to wrap up emissions case Monday

By Candace Page

April 29, 2007

If the auto industry's testimony in U.S. District Court in Burlington is to be believed, prospects are dim for slashing greenhouse gas emissions from American cars and trucks in the next decade.

Prospects for U.S. auto companies might not be so great, either.

Automakers will wind up their case against Vermont's greenhouse gas regulations Monday after nearly 10 days of

testimony from industry experts who repeated over and over that car companies cannot reduce emissions 30 percent by 2016 as the state would require.

No auto companies can meet the standard, industry lawyers asserted, but testimony focused on the plight of two of the country's Big Three automakers, General Motors and DaimlerChrysler.

Both companies committed in the 1990s to product lines stocked with bigger, heavier vehicles that traded fuel economy improvements for performance. Retooling to add fuel-saving technology to those vehicles, or to build a fleet of smaller, more fuel-efficient cars, would take more than a decade -- and still wouldn't cut emissions enough, the experts said.

One of DaimlerChrysler's top engineers was asked on the witness stand, what if CEO Thomas LaSorda gave you the job, the money and the manpower to improve fuel economy 4 percent a year?

"To me that's an impossible task," Robert Lee, vice president for powertrain engineering, testified. "At some point here I'd have to tell Tom I want to retire."

Vermont and its allies are scheduled to begin their defense Monday afternoon. Their witnesses will rebut the automakers' gloomy predictions, lawyers said, and hold out the likelihood of greater improvements in a shorter time.

Automakers had better hope they are wrong and Vermont is right, lawyers said. With gasoline prices hitting \$3 a gallon and consumers more interested than ever in high gas mileage, Detroit must change quickly -- whether Vermont's rules stand or not.

"Win or lose this case, they're in trouble because of the price of gasoline," said Steve Hinchman, a lawyer for the Conservation Law Foundation, one of Vermont's allies in the case. "The worst outcome for Detroit is for them to win this case and continue basing their business plans on these super-sized trucks and SUVs."

Outside the courtroom, headlines drove home the changing dynamics of the auto industry: Tuesday came word that Toyota passed General Motors in quarterly global sales for the first time.

"Toyota's fuel-efficient cars, such as the Corolla, Yaris and gas-electric hybrid Prius, are big hits because of surging gas prices," an Associated Press story noted.

A 'dramatic' gain?

Automakers are asking Judge William Sessions to throw out Vermont's adoption of regulations written in California. Vermont is one of 11 states to have followed California's lead; Maryland signed up just last week.

The California rules require auto companies to begin reducing greenhouse gas emissions, mostly carbon dioxide, by 1 or 2 percent in the 2009 model year. The reductions ratchet up sharply in 2012. By 2016, the emissions reduction in the passenger car fleet would top 30 percent.

Automakers say the only practical way to cut emissions is to burn less gasoline. By 2016, the rules would require cars to get 43.7 miles per gallon, a nearly 60 percent increase, and heavier pickup trucks and SUVs to get 26.9 miles per gallon, a 32 percent increase.

"In our business, a tenth of a mile improvement in fuel economy is dramatic improvement," GM executive Al Weverstad testified, as he explained his company would find it impossible to improve fuel economy fast enough.

The automakers' case has focused on two areas.

First, witnesses from GM, DaimlerChrysler and independent consulting firms testified that California regulators overestimated the emissions benefits and underestimated the financial costs of using new technologies to comply with the rules.

Second, many of the same witnesses said there's not enough production-ready, fuel-saving technology to meet the 43.7 mpg standard by 2016.

Their testimony was a litany of "can'ts": can't depend on production of ethanol-fueled vehicles to meet the emissions limits because ethanol won't be widely available in Vermont and besides, it is too expensive; can't depend on plug-in hybrid electric vehicles because battery technology won't be ready by 2016; can't switch to diesel fuel because it is too

expensive.

Even installing production-ready technology would drive up the cost of a car or truck by \$6,000 or more, and cost the car companies billions they could not recover from customers, the car company executives testified.

Instead of investing those billions, the GM and DaimlerChrysler executives said their companies would stop selling some of their cars and trucks in Vermont by 2012 and would have few, if any, new vehicles for sale here by 2016.

In a windowless courtroom

Squadrons of lawyers enter the federal building on Elmwood Avenue each morning before 8. Most mornings, St. Michael's College professor and poet Greg Delanty greets them on the sidewalk with his "Stop Global Warming" poster.

"I want them to see me as they go in," he said one chilly morning. "I'm just very worried about global warming."

Inside, the lawyers -- 38 are working on the case, Sessions toted up one day -- and witnesses spend eight hours in a windowless fifth-floor courtroom.

Over the last three weeks the audience has included University of Vermont students, two energy-efficiency entrepreneurs, lawyers from the California attorney general's office and the parents of the auto industry's lead lawyer, Andrew Clubok.

Most of the spectators leave quickly. Testimony has been technical, dry and repetitive, full of discussions of the fuel-saving advantages of two-mode hybrids, variable valve timing and homogeneous charge compression ignition.

Cross-examination of the auto industry witnesses by lawyers for New York state and several environmental groups, Vermont's allies, has been long and contentious and, to a layperson's eye, failed to open any major holes in the automakers' case.

"He didn't seem to be making many points," UVM junior Gregory Stewart said one day after watching a New York assistant attorney general cross-examine one industry expert.

Vermont gets a turn

Monday afternoon, the courtroom focus will switch to Vermont's defense.

The state will call its own automobile cost and technology experts to testify that car companies have the expertise to meet the emissions limits, and can do so for much less money than they estimate.

James Hansen, the federal government's top climate expert, will testify about the necessity of curbing greenhouse emissions. Barrett Rock, a University of New Hampshire scientist, will describe the likely impact of global warming on Vermont.

In the end, it's not clear whether the days and weeks of testimony about costs, technology and looming global catastrophe will carry the day.

Both sides say Sessions could decide the case purely as a matter of law.

He could decide, as automakers argue, that the federal fuel-economy law bars states from enacting any regulation related to fuel economy.

Or, he could agree with Vermont, that greenhouse regulations are directed at emissions and are explicitly authorized by the Clean Air Act, backed up by this month's U.S. Supreme Court decision in Massachusetts v. EPA.

The judge has also shown interest in another potential resolution. After listening to one auto industry witness complain about the 2016 timeline, he asked, "Essentially your objection is to the time frame?"

"Yes," answered the witness, Reginald Modlin of DaimlerChrysler.

Well, then, Sessions asked Vermont's lawyers, could the U.S. Environmental Protection Agency -- which must approve California's regulations but has not done so yet -- endorse them, but order a stretched-out compliance period beyond

2016?

Yes, answered the lawyers for Vermont.

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Emissions trial sees wrangle over costs

By Candace Page
Free Press Staff Writer

April 26, 2007

Did California regulators cook the books in their cost estimates of some of the ways automakers could comply with tough new greenhouse gas emissions limits?

Testimony by a private consultant who worked on those estimates -- but disassociated himself from the final result -- raised that possibility Wednesday in U.S. District Court in Burlington. Kevin McMahon testified as automakers' legal challenge of Vermont's adoption of the California regulations ground through its ninth day.

"My conclusion is that the goal of producing a credible study was not achieved," McMahon, a transportation expert testified.

The California and Vermont regulations require automakers to begin reducing greenhouse gas emissions in 2009. Automakers say the only practical way to comply is to reduce fuel consumption. By 2016, they argue, each automaker would have to attain an impossible average of 43.7 miles per gallon for its fleet of cars and light pickup trucks.

Another fundamental disagreement between the automakers and Vermont and its allies is what it would cost the auto industry to build cleaner cars. California regulators estimated that cost at about \$1,000 a car; the automakers say costs could top \$6,000.

Before California adopted the regulation in 2004, a nonprofit group, the Northeast States Center for a Clean Air Future, hired McMahon's company and others to assess the feasibility and cost of carbon dioxide-cutting technology.

McMahon collected data from automotive technology companies, then analyzed the cost of adding various combinations of technical improvement to cars and trucks.

Once he turned those estimates over to the Northeast States group they were altered in unjustified ways, he testified. For example, he said, the final report used an "impossibly low" number for how much automakers would have to mark up the cost of the new technologies to cover their fixed costs.

McMahon said after seeing the Northeast States' report, his company declined to be listed as an author because its cost conclusions were not credible.

Later, the California regulators used the Northeast States report as the basis of their cost estimates, but in the case of five technology combinations, they slashed the estimates by 30 percent on grounds that, over time, "unforeseen innovations" would allow additional savings.

"That's not something any auto manufacturer would assume," McMahon testified.

Outside the courtroom, attorneys for the state and its allies noted that the California regulators applied the 30 percent reduction to only a small number of the many technology combinations that were analyzed. They also said the bottom line

estimates arrived at in California square with estimates arrived at in other reports, including one from the National Academy of Sciences.

The trial resumes at 8:15 a.m. Monday. Automakers will present their final witness, a General Motors engineer. Then the state will begin its case with the testimony of Tom Moye, an air pollution control analyst at the Vermont Agency of Natural Resources.

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Emissions limits put U.S. automakers at disadvantage, witness says

By Candace Page
Free Press Staff Writer

April 24, 2007

Given more time, Toyota and Honda could comply with Vermont's 2016 greenhouse gas emissions standards at a cost that ranges from a few hundred dollars for some trucks to nearly \$4,000 for some cars, an auto industry expert testified Monday in U.S. District Court.

The Big Three American automakers -- Ford, General Motors and DaimlerChrysler -- would have a much more difficult time complying, Thomas Austin testified.

General Motors, for example, would have to install electric hybrid technology in more than 60 percent of the cars it sells and would have to raise prices more than \$5,000 per car, he said.

Honda and Toyota sell hybrid cars and a number of conventional models with high fuel economy. Even those two companies would require 12 years to meet the fleet-average emissions limits, Austin said, given the long lead time it takes auto manufacturers to retire old models and produce new ones with different features. They could comply in 2016 by pulling some of their lower miles-per-gallon models off the market in Vermont, he said.

"There is absolutely no way we can have compliance across the board by 2016," Austin testified.

Austin, an expert in the cost of complying with environmental regulations, testified on behalf of automakers on Day 7 of the industry's court battle to overturn Vermont's adoption of emissions limits set in California.

The regulations require automakers to begin reducing greenhouse gas emissions in 2009, with greater reductions required through 2016. The only practical way to comply, the industry maintains, is to increase the average fuel economy of each automaker's fleet of cars to 43.7 mpg.

That's impossible, witness after witness has testified.

The state of Vermont and its allies are expected to call experts who will testify that automakers could employ a variety of strategies to limit emissions to the new standard.

Austin was the only witness Monday. He told the court California's Air Resource Board erred in its calculations of the cost of complying with the regulations.

Among other things, he said, the board assumed use of some technologies that aren't ready for production; assumed installation of technology that would require motorists to purchase premium gasoline; and "arbitrarily reduced" cost estimates based on an expectation of "unforeseen innovations."

For much of the day, Austin was cross-examined by Simon Wynn, a New York assistant attorney general, who sought to

highlight errors in some of Austin's data and to emphasize ways in which the transportation world is changing and might force automakers to change, regardless of the California greenhouse regulations.

New York, which also adopted the California limits, has intervened in the court case on Vermont's side.

Austin dismissed his errors (in one data set, a compact car was erroneously listed as weighing 900 pounds more than a midsize sedan, for example), saying those data were used only for a supplemental analysis. Accurate data were used in his basic analysis of compliance costs, he said.

Wynn questioned Austin persistently about the likely effect on automakers if the Bush administration were successful in its stated goal of raising federal fuel economy standards 4 percent a year, action that would narrow the gap between Vermont's requirements and the federal government's.

Austin said he was not convinced the 4 percent per year improvement policy would ever be enacted -- or that automakers could comply if it did take effect.

The trial continues today with additional expert witnesses on behalf of the automakers.

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Economist sees unintended consequences in Vt. emissions limits

By Candace Page
Free Press Staff Writer

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Vermont's greenhouse gas emissions limits would encourage the state's motorists to add more than 1 million miles a day to the distances they drive by the year 2030, an economist hired by the auto industry testified Thursday in U.S. District Court.

David Harrison, a private consultant, told U.S. District Judge William Sessions the state's greenhouse gas rules will require cars to get better gasoline mileage, thus cutting gasoline consumption. If motorists are saving money at the pump, they will drive more, he said.

He said his analysis also shows that more Vermonters will hold on to their old cars, rather than buy new ones because new cars built to comply with the new rules will be more expensive.

Harrison's analysis was intended to bolster automakers' argument that Vermont's rules could increase greenhouse gas emissions, if some motorists drive more and others hold on to their old, more polluting cars.

"In my opinion, these regulations would reduce new vehicle sales," he testified. "Overall the fleet of vehicles will become older ... (and) there will be an increase in vehicle miles traveled in Vermont."

Automakers are seeking to overturn Vermont's adoption of California emissions limits as illegal, technologically impossible to meet and costly to consumers. The rules would require automakers to cut greenhouse gas emissions from passenger cars more than 30 percent by 2016.

The state and its allies are expected to call expert witnesses who will disagree with Harrison's analysis.

Harrison testified that it is a well-established economic rule that when the cost of something goes down, people consume more of it. That will hold true of driving as well, he said, displaying a graph that showed more and more miles traveled as the greenhouse gas rules kick in, topping out at 1.4 million extra miles a day in 2030. (In 2005, Vermont reported 7.7

billion vehicle miles traveled, an attorney for the automakers said.)

Assistant Attorney General Scot Kline cross-examined Harrison, raising questions about the validity of the assumption that Vermonters are looking for opportunities to spend more time on the highway.

"Have you ever driven in winter in Vermont?" he asked rhetorically.

Also in court Thursday:

Auto emissions expert Harold Haskew gave the court a lesson in mathematics and chemistry as he explained why he believes a limit on greenhouse gas emissions amounts to regulation of fuel economy. The only way to reduce carbon dioxide emissions, he said, is to burn less fuel.

On cross-examination, John Tripp, a lawyer for Environmental Defense, one of the state's allies in the case, drew out that carbon dioxide is not the only greenhouse gas emitted by cars. Reducing leakage of greenhouse gases from vehicle air conditioning systems could provide 15 percent of the cuts needed by 2016, Haskew said.

Lawyers for the two sides squabbled over whether the automakers should be allowed to call a new expert on global climate change to replace Patrick Michaels, the University of Virginia scientist they had lined up. Michaels recently decided he will not testify, for reasons not explained in court. Sessions said he would rule next week on whether an expert can be substituted midtrial.

The trial continues today.

Contact Candace Page at 660-1865 or cpage@bfp.burlingtonfreepress.com



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Auto executives testify at emissions trial

By Candace Page
Free Press Staff Writer

April 14, 2007

The litany of "can'ts" continued Friday in U.S. District Court, as DaimlerChrysler executives hammered away at Vermont's greenhouse gas emissions limits, saying American consumers and government policy are big reasons the company's U.S. fleet can't match the fuel economy of its European fleet.

Three company officials reiterated to Judge William Sessions their firm doesn't have the technology, money or lead time to cut greenhouse gas emissions by 30 percent by the 2016 deadline set in the California emissions regulations adopted by Vermont.

They also acknowledged that DaimlerChrysler's European fleet comes closer to meeting the limits by averaging 50 percent better fuel economy than the fleet of cars the company sells in the United States.

"We build into our thought process consumer preference," Reginald Modlin, DaimlerChrysler's director of environmental affairs testified. Americans' preference is for bigger, heavier, gasoline-driven cars. Europeans are willing to buy smaller, lighter, diesel-driven cars.

DaimlerChrysler's European fleet averages 36 miles per gallon; its U.S. fleet, 24 to 25 mpg.

The company, along with General Motors, two industry groups and three Vermont auto dealers, is suing Vermont to overturn the emissions limits. The reductions would begin in 2009 and increase each year until 2016.

Robert Lee, the company's vice president for powertrain engineering -- the department that designs systems that power cars and trucks -- said what Vermont and California are demanding is simply impossible.

"If Governor Schwarzenegger came into your office and said, 'Get off your butt and get working!' could you speed up your four-year lead time" for major technology improvements? auto-industry attorney Andrew Clubok asked Lee.

Clubok was referring to a speech California Gov. Arnold Schwarzenegger made earlier this week, urging automakers to cut greenhouse gas emissions. He was quoted as saying, "What I'm saying to Michigan is, 'Michigan, get off your butt and join us.'"

"It's just not possible," Lee said.

He also testified that improving fuel efficiency about 1.5 percent a year -- slightly better than the 1 percent industry average improvement over the last decade -- is about the limit of what DaimlerChrysler could do.

That would leave the company far short of meeting the 43.7 mpg passenger fleet average it would need to meet the Vermont regulations. While the rules apply to carbon emissions, cutting fuel consumption is considered the only practical way to cut those emissions.

In cross-examining Modlin, an attorney for the defendants -- the state of Vermont and its allies -- introduced DaimlerChrysler testimony that was very different, at least in tone.

In March, Thomas LaSorda, the company CEO, testified before a U.S. House subcommittee on his company's commitment to improving fuel economy and cutting greenhouse gas emissions.

LaSorda listed the half-dozen new technologies his company is using or plans to use to improve fuel economy, including light-duty diesel trucks that emit 20 percent less greenhouse gases.

He said of the company's ability to improve fuel economy year after year, "For those who advocate 4 percent annual ... increases over the next 10 years -- which translates to a 50 percent fuel economy increase -- we know how to do that, too. In fact, we already do it, in Europe."

But in Europe, LaSorda and the DaimlerChrysler executives who testified in Burlington said, gasoline carries a \$5 per gallon tax. Buyers of diesel pay \$1 less. European geography and urbanization also encourages smaller cars, they said.

"They've had expensive oil for a long time, and that has shaped their society," DaimlerChrysler Chief Economist Van Jolissaint told the court Friday. "People will pay for technologies in Europe that they won't pay for here. Our market research shows that in the U.S. customers have to be convinced to pay for diesel. They will not pay a premium." Contact Candace Page at 660-1865 or cpage@bfp.burlingtonfreepress.com

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DaimlerChrysler says it cannot meet Vt. emissions limits

By Candace Page
Free Press Staff Writer

April 13, 2007

An executive of DaimlerChrysler Corp. on Thursday echoed claims made this week by General Motors in U.S. District Court in Burlington, saying his company also doesn't have the technological capacity to produce a fleet of cars that complies with Vermont's greenhouse gas emissions standards.

Instead, DaimlerChrysler would begin limiting the models of cars and trucks it ships to Vermont auto dealers in 2012,

Reginald Modlin, director of environmental affairs, testified.

As the emissions limits get tougher in the following years, more models would be dropped, until in 2016 the company would sell only its two-passenger Smart car here, he said.

"We would try to stay in the market as long as we could, then remove product carefully," he said.

Modlin was the chief witness on the third day of the auto industry's court challenge of the greenhouse gas rules written by California and adopted by 10 other states, including Vermont. Those rules call for a 30 percent reduction in emissions by 2016, a target the automakers say would require their passenger car fleet to average 43.7 miles to a gallon.

Vermont, New York and five environmental groups argue that the auto industry as a whole is capable of cutting emissions to meet the rules.

"As it will be shown, the only manufacturers capable of alleging injury are ... General Motors and DaimlerChrysler," the state's legal brief asserts.

Also testifying Thursday was Ron Carpenter, owner of Green Mountain Chrysler-Plymouth-Dodge-Jeep in East Dorset, who is one of three Vermont auto dealers who are parties to the lawsuit.

He testified that his business is heavily weighted to pickup trucks and "I'd be out of business" if DaimlerChrysler stopped supplying him with trucks.

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Technology can't cut emissions fast enough, car makers say

By Candace Page
Free Press Staff Writer

April 12, 2007

A General Motors executive Wednesday rejected suggestions that a list of "clean-car" technologies under development would enable his company to meet Vermont's greenhouse gas emissions limits.

Alan Weversted, GM's director of environment and energy, testified for a second day in U.S. District Court in Burlington, where his company and the auto industry are seeking to overturn the state's adoption of tough California limits on emissions that contribute to global climate change.

Weversted said his company believes it is capable of improving fuel economy -- and thus reducing greenhouse gas emissions -- at a rate of 2 percent a year to meet changing federal fuel economy standards for some light-duty trucks.

The California greenhouse gas rules adopted by Vermont require deeper cuts in emissions, about 30 percent by 2016. That translates to mileage standards of 43.7 miles per gallon for passenger cars and about 26.9 miles to a gallon for light trucks. GM cannot meet those standards, he said.

Vermont and its allies -- the state of New York and several environmental groups -- believe carmakers have adequate off-the-shelf and developing technology to comply with the state regulation, their questioning of Weversted indicated.

Under cross-examination, the GM executive was asked about a series of technologies the automaker uses in Europe or has installed in prototype cars and often touts in its "green" marketing campaign. In each case, Weversted said the technology is far from U.S.-production-ready. They included:

"Clean diesel" engines widely used in European cars. While the engines emit less carbon dioxide, they emit smog-forming

gases that would violate U.S. standards, Weversted said. GM believes its gasoline-electric hybrid engine will "provide better fuel economy at less cost" than clean diesel, he testified.

A future generation of hybrids known as "plug-ins." The vehicles' batteries can be recharged by plugging them into an electrical outlet. Adequate batteries have not been developed, he said. "We have not proven to ourselves that it will work, that we can make it work," he said.

Hydrogen fuel cell vehicles, with motors run by electricity generated from hydrogen fuel and oxygen. While GM engineers have a 2011 target to design this zero-emission vehicle, production is further off, Weversted said, and no one has solved the problem of installing hydrogen filling stations.

Ethanol-fueled cars. Problems include making the corn-based fuel available at service stations across the country and meeting smog-emissions standards, he said.

GM faces a particular problem meeting stricter fuel economy limits, Weversted testified, because its fleet is weighted toward bigger cars that tend to get lower gasoline mileage.

The implications of that point were driven home by the testimony of Joe Tornabene, a GM auto dealer in Pownal and one of three Vermont auto dealers who are suing the state.

Tornabene sells 100 to 200 vehicles a year, all of them SUVs or pickups. He described the GMC Sierra truck as "the backbone of our fleet, basically." The Sierra gets 18 to 22 miles per gallon in highway driving, according to GM's web site.

Vermont's emission limits don't require each individual car or truck model to meet an emission standard. Instead, GM's fleet would have to meet the limits, on average. Tuesday, Weversted had testified GM would simply stop selling cars and trucks in Vermont.

Auto industry lawyers used Tornabene's testimony to argue that, even short of removing vehicles from the market, price increases would cut sales and hurt auto dealers.

What if the price of a new truck goes up \$5,000 to cover the cost of new fuel-saving technology, Tornabene was asked?

"It would probably shut us down," he said.

Contact Candace Page at 660-1865 or e-mail cpage@bfp.burlingtonfreepress.com