WASHINGTON LEGAL FOUNDATION

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July 1, 2008

Nicole R. Nason, Administrator National Highway Traffic Safety Administration Department of Transportation 1200 New Jersey Avenuc, SE Washington, D.C. 20590

Re: Docket No. NHTSA-2008-0089; RIN 2127-AK29: Proposed Rule for Average Fuel Economy Standards, Passenger Cars and Light Trucks; Model Years 2011-2015, 73 Fed. Reg. 24,352 (May 2, 2008).

Dear Administrator Nason:

The Washington Legal Foundation (WLF) hereby submits these comments in response to the Notice of Proposed Rulemaking (NPRM) published by the National Highway Traffic Safety Administration (NHTSA) that would substantially increase the Corporate Average Fuel Economy (CAFE) standards for passenger and light trucks for Model Years (MY) 2011-2015. 73 Fed. Reg. 24,352 (May 2, 2008). This rulemaking proceeding is required by the Energy Independence and Security Act of 2007 (EISA) enacted last December (Pub. L. No. 110-140), which amended the Energy Policy and Conservation Act (EPCA), the 1975 statute that governs CAFE. More particularly, Subtitle A of Title 1 of EISA, the Ten-in-Ten Fuel Economy Act, sets a CAFE standard of a minimum of 35 mpg by MY 2020 for the combined passenger automobile and light truck fleet (though individual CAFE standards must be set for each fleet separately). The proposed rule, which covers only the first half of the 10 model years covered by EISA, would set passenger standards at 31.2 mpg in MY 2011, increasing to 35.7 mpg in MY 2015. Light trucks would increase from 25.0 mpg to 28.6 mpg. 73 Fed. Reg. 24,355. Further increases are plauned for later rulemaking to cover MY 2016-2020.

Because CAFE is designed to improve fuel efficiency, and because carbon dioxide (CO2) is a natural by-product of fuel combustion, the proposed standards would, as NHTSA discusses in its NPRM, reduce CO2 which constitutes almost all of the greenhouse gas (GHG) emissions from vehicles. Accordingly, individual states that have proposed or promulgated GHG rules for automobiles conflict with the proposed federal CAFE. As will be further discussed herein, WLF supports NHTSA's finding that the state regulations are pre-empted by CAFE under the express pre-emption provision of EPCA and implied pre-emption principles, just as it did in 2006 light truck CAFE standards through MY 2011. 71 Fed. Reg. 17,669-70. WLF also encourages NHTSA to ensure that (1) its CAFE requirements are developed in such a way so as not to impose undue costs to the industry and consumers, which will translate into loss of jobs in these

troubled economic times and add to the price of new vehicles for consumers, (2) that all costs are accurately and fully accounted for and do not outweigh properly computed benefits, and (3) that safety -- which, of course, is the mission and middle name of $NHTSA^3$ -- is not compromised by effectively forcing manufacturers to reduce the weight of their vehicles to meet aggressive fuel economy standards, thus making them less crashworthy.

Interests of WLF

WLF is a national, nonprofit public interest law and policy center based in Washington, D.C., with supporters nationwide. Over the past 30 years, WLF has participated in numerous regulatory proceedings and court cases promoting free enterprise principles and civil justice reform, and opposing excessive regulatory burdens, novel theories of tort liability, and excessive punitive damages that hamper product development, increase consumer prices, and destroy jobs.

In particular, WLF believes that it is in the public interest to have consistent and uniform national standards with respect to manufactured goods that are sold and used on a nationwide and interstate basis rather than subject large segments of the United States economy to a patchwork quilt of confusing, conflicting, and costly state and local regulations contrary to the public interest. Indeed, the Supremacy Clause of the Constitution compels federal preemption of state and local rules in appropriate cases. In that regard, WLF has participated in many cases raising preemption issues and has filed amicus briefs urging the courts in those cases to find federal preemption. See, e.g., Geier v. American Honda Motor Co., 529 U.S. 861 (2000); Buckman v. Plaintiffs' Legal Committee, 531 U.S. 341 (2001).

In addition, WLF filed comments with NHTSA in 2005 on its proposed safety standard on roof crush resistance. See Dkt No. NHTSA-2005-22143; RIN 2127-AG51: Federal Motor Vehicle Safety Standards; Roof Crush Resistance, 70 Fed. Reg. 49,223 (Aug. 23, 2005). In its comments, WLF agreed with NHTSA that its rule pre-empts state law on roof crush standards, including state tort claims, despite a savings clause in 49 U.S.C. § 30103(c). That rulemaking is still pending.

In addition, WLF has participated in related environmental cases involving the regulation of GHG and global climate change. In particular, WLF filed an amicus brief in *Massachusetts v. EPA*, 127 S. Ct. 1438 (2007), arguing that Congress did not give authority to the EPA under the Clean Air Act to regulate carbon dioxide emissions for climate change purposes. While the Court ruled otherwise, the opinion did not address preemption, although it did note that a state's attempt "to reduce in-state motor-vehicle emissions might well be pre-empted" and noted that the any state prerogatives in this area "are now lodged in the Federal Government." 127 S. Ct. at 1454. In addition, WLF filed amicus briefs in a global warming case in the Second Circuit, *Connecticut v. American Elec. Power Co. Inc.*, 406 F. Supp. 2d 265 (S.D.N.Y. 2005), appeal pending, Nos. 05-5104-cv; 05-5119-cv (2d Cir.), and in the Ninth Circuit, *California v. General*

¹ As stated at the top of NHTSA's home page, "Our Mission: Save lives, prevent injuries, reduce vehiclerelated grashes." http://www.nhtsa.dot.gov.

Motors, 2007 WL 2726871 (N.D. Cal. Sept. 17,2007), *appeal pending*, No. 07-16908, supporting the district courts' dismissals of the public nuisance suits against power companies and automobile manufacturers. Those cases alleged that the emissions from the corporate defendants' products and power plants caused global warming, but in each matter the district courts held that the complaints presented a nonjusticiable political question.

WLF's Legal Studies Division also publishes legal policy papers on preemption issues. See, e.g., Erika Z. Jones & Adam C. Sloane, Federal Law Preempts California's Attempt To Regulate Global Warming (WLF Legal Opinion Letter, Mar. 11, 2005); Eric Lasker, Federal Preemption and State Anti-"GM" Food Laws, (WLF Legal Backgrounder, Dec. 2, 2005); Ann Grimaldi, Would You Like a Prop 65 Warning With Those Fries? (WLF Legal Backgrounder, Nov. 18, 2005); Gene Livingston & Lisa L. Halko, The Jungle vs. Prop 65: Federal Law Preempts California Health Warnings," (WLF Legal Backgrounder, Sept. 9, 2005); James Dabney Miller, FDA Preempts "Failure-To-Warn" Pharmaceutical Liability Claims (WLF Counsel's Advisory, Jan. 27, 2006). Further information about WLF and its activities can be found on its website at www.wlf.org.

Comments

I. NHTSA Impermissibly "Front Loads" Increased Fuel Economy Standards in the First Five Years.

Just as the original CAFE standards were imposed in 1975 as a result of the Mideast oil embargo, the current or Reformed CAFE standards are being proposed in light of a perceived new energy crisis and rising gasoline prices. As noted, the proposed rule would require fuel economy for passenger cars to reach a minimum of 31 mpg for MY 2015 and light trucks to reach 28.6 mpg. If manufacturers exceed that standard, they will earn credits that can be carried forward or carried back. Under new reforms Congress mandated in 2007, credits can also be applied to a different vehicle class that has not met the standard. Credits can now also be traded among manufacturers to meet the standards.

Under this Reformed CAFE, every model of new vehicle will have its own fuel economy target based on the vehicle's "attribute," namely, the footprint or size of the vehicle derived by multiplying the length of its wheelbase times the distance between the two axles. 71 Fed. Reg. 17,566. In that regard, Reformed CAFE takes into account the vehicle's size and is an improvement over carlier CAFE standards that were not attribute-based, and thus resulted in the manufacturing of smaller and lighter cars, which in turn, resulted in thousands of deaths and injuries.² Nevertheless, it appears that NHTSA is taking an overly aggressive approach in reaching the statutory target of 35 mpg in MY 2020 during the first five-year period in a fashion that could compromise safety as well as lead to undue costs and burdens on the industry.

² See National Academy of Sciences, Effectiveness and Impact of Corporate Average Fuel Economy Standards 2002 (estimating 2,000 deaths per year and up to 26,000 incapacitating injuries in 1993 alone).

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In that regard, WLF agrees with the analysis presented by the Alliance of Automobile Manufacturers (AAM) in its comments on the proposed rule that NHTSA is improperly "frontloading" much of the necessary increases in fuel economy standards into the first five-year period by requiring an average annual increase of 4.5 percent rather than spreading the increased fuel economy standards out more evenly and steadily over the ten-year period. *See* Attachment 1 to AAM Comments at 22-23. Not only does it appear that this front-loading approach is inconsistent with EISA, which requires the yearly standards to be set "ratably" over the ten-year period, it is also contrary to NHTSA's intent to give sufficient lead time to manufacturers to design their fleet. Moreover, NHTSA presented insufficient evidence to show that manufacturers who are in the design stages for MY 2011, for example, have the technological capability to meet these aggressive goals.

In that same vein, WLF submits that NHTSA also errs when it states without citation in the Federal Register that the "law permits CAFE standards exceeding the projected capability of any particular manufacturer as long as the standard is economically practicable for the industry as a whole." 73 Fed. Reg. at 24,363. NHTSA did not explain in its 2006 light truck final rule, and does not explain in the current NPRM, why the shift to Reformed CAFE requires complete abandonment of the agency's prior longstanding approach to avoid exceeding the capabilities of the least-capable manufacturer. CAFE standards can be set using an attribute basis, while also simultaneously avoiding levels of stringency that surpass the projected capability of a major manufacturer. There is no incompatibility between attribute-based standards and this prior constraint on stringency, NHTSA attempts to equate its abandonment of that constraint on stringency by arguing that the "CAFE program is not necessarily intended to maintain the competitive positioning of each particular company." Id. But that proposition, even if true, does not support the agency's changed approach that the stringency of CAFE standards can now be increased so dramatically that the projected capability of a major manufacturer to meet those standards can be exceeded. See, e.g., Public Citizen v. Federal Motor Vehicle Carrier Ass'n. 374 F.3d 1209, 1216 (D.C. Cir. 2004).

This is an invalid approach and set of assumptions. For an illustration of how to properly approach the issue of capital constraints, NHTSA needed to look no farther than its sister agency, the Department of Energy, which administers a different, but related portion of the EPCA statute, namely the energy efficiency standards for appliances and industrial equipment. See 42 U.S.C. ch. 77 ("Energy Conservation"), subch. III ("Improving Energy Efficiency"), part A ("Energy Conservation Program for Consumer Products Other Than Automobiles") & part A-1 ("Certain Industrial Equipment"), §§ 6291-6320.

In setting the energy officiency standards for residential furnaces and boilets as recently as November 2007, the Department of Energy was particularly cautious about setting those standards in recognition of the fact that the industry in question also produced air conditioning equipment that recently had been subjected to new

³ One reason NHTSA may be front-loading the standards is because it has failed to consider the issue of the capital constraints on the automobile industry in its Preliminary Regulatory Impact Analysis ("PRIA"). "The agency does not have the capability to predict the capital investment uceds of the automobile industry to install fuel economy technologies, nor the capability to determine the level of capital investments available to specific manufacturers in the future." PRIA at VII-40. Therefore, NHTSA stated it simply would assume that because "prices would be increased the manufacturer would get back that investment when the vehicles are sold . . . [our] methodology does not determine whether automobile manufacturers can pay for research and development, product development, plant changes, and tooling necessary to get the technology into the vehicles in the first place." *Id.*

II. NHTSA's Underestimates the Costs and Overstates the Benefits of its CAFE Standards.

NHTSA has estimated that the societal benefits of Reformed CAFE for each model year for passenger cars and light trucks outweigh the costs, resulting in net benefits that increase each model year. The total net benefits for passenger cars for the five-year period (MY 2011-2015) is estimated by NHTSA to be \$15.1 billion and \$26.4 billion for light trucks, for a combined net benefit of \$41.5 billion. See CRS Report for Congress, Automobile and Light Truck Fuel Economy: The CAFE Standards (Update May 7, 2008) at 8. WLF submits, however, that these projected net benefits are not accurate because they overstate the total benefits and understate the true costs.

According to the reports of two expert consulting firms, Sierra Research Inc. and NERA Economic Consulting, submitted by AAM with its comments, instead of net benefits, there would be net private costs to consumers, reduced sales of new vehicles, and related job losses of 82,000. See Attachment 1 to AAM Comments at 5-9; 28-41 (referencing Sierra and NERA reports). For example, for MY 2015, NHTSA estimates a net benefit of \$12 billion, whereas Sierra and NERA reports show net losses to society of \$28.9 billion in 2006 dollars. This whopping \$41 billion difference between NHTSA's calculations and those of Sierra and NERA reveals serious shortcomings with NHTSA's cost-benefit analysis, including its selection of a 7 percent discount rate instead of a more appropriate 12 percent figure. Id. at 30-32.

III. NHTSA's CAFE Rules Expressly and Impliedly Preempt State Regulation of CO2 Emissions from Automobiles.

While WLF takes issue with the formulation of NHTSA's CAFE standards, we fully agree as a matter of law and sound public policy with NHTSA's position articulated in proposed Appendix A to the passenger car standard and proposed Appendix B to the light truck standard that the final standards that it ultimately adopts expressly pre-empts any state's regulation of GHG. This is true because any state regulation regulating CO2 emissions "relates to" fuel economy standards within the meaning of 42 U.S.C. 32919, and thus, is expressly pre-empted. Thus, California's Air Resource Board (CARB) regulations adopted in 2004 imposing limits on CO2 emissions from automobiles clearly "relate to" fuel economy standards and are thus

regulatory mandates into which substantial amounts of all available investment capital had already been sunk. See 72 Fed. Reg. 65,136 (Nov. 19, 2007). "DOE is aware that manufacturers are working to redesign all of the product lines of residential air conditioners and have allocated most of their capital resources for redesigning and retooling their production lines to meet the new minimum efficiency standard and refrigerant phascout. DOE quantified the anticipated level of investment needed to meet each of these two regulatory actions along with others facing the industry in Chapter 12 of the NOPR [Notice of Proposed Rulemaking] TSD [Technical Support Document]. 71 FR 59244- 29245." 72 Fed. Reg. at 65,149. The Department of Energy, also recognized its duty under EPCA, when setting furnace and boiler energy efficiency standards, to consider cumulative regulatory burden. See id. at 65,161 ("Manufacturers have been working to redesign all of the product lines to meet the new minimum efficiency standards the new minimum efficiency standards for redesigning and retooling their product lines to meet the new or redesign all of the product lines and have allocated most of their capital resources for redesigning and retooling their product lines and have allocated most of their capital resources for redesigning and retooling their product lines to meet the new minimum efficiency standards [for air conditioners]. Manufacturers are also now re-designing their product offerings and will need to retool to meet the EPA standards [for refrigerants used in those air conditioners]. Chapter 12 of the final rule TSD addresses in greater detail the issue of cumulative regulatory burden.").

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expressly preempted.

WLF also fully agrees with NHTSA's position that its standards would also impliedly pre-empt CARB's regulations because those state standards conflict with the design and methodology of the federal standards that must follow specific statutory factors, and would alter the mix of vehicle models available to California consumers Accordingly, WLF urges NHTSA to adopt those appendices in its Final Rule.

A. Preemption Principles

Under the Supremacy Clause of the Constitution, Article VI, section 2, "the Laws of the United States which shall be made in Pursuance [of the Constitution]... shall be the supreme Law of the Land." The underlying purpose of the Supremacy Clause, like the Commerce Clause, is to enable the federal government to regulate within its express and delegated powers at a national level on matters of national concern, especially those matters involving interstate commerce, without undue interference by state laws and regulations. While the Supremacy Clause appears on its face to be self-executing, Congress surely has the power to make it expressly clear or expressly delimit its preemptive powers in statutory language. In addition, federal law can impliedly pre-cmpt state regulation of the subject matter in question.

In brief, as explained by the Supreme Court, federal preemption of state regulations, including state-tort law claims, can arise under three circumstances:

First, Congress can define explicitly the extent to which its enactments pre-empt state law. Pre-emption fundamentally is a question of congressional intent, and when Congress has made its intent known through explicit statutory language, the courts' task is an easy one.

Second, in the absence of explicit statutory language, state law is pre-empted where it regulates conduct in a field that Congress intended the Federal Government to occupy exclusively. Such an intent may be inferred from a "scheme of federal regulation ... so pervasive as to make reasonable the inference that Congress left no room for the States to supplement it," or where an Act of Congress "touch[es] a field in which the federal interest is so dominant that the federal system will be assumed to preclude enforcement of state laws on the same subject." Although this Court has not hesitated to draw an inference of field pre-emption where it is supported by the federal statutory and regulatory schemes, it has emphasized: "Where ... the field which Congress is said to have pre-empted" includes areas that have "been traditionally occupied by the States," congressional intent to supersede state laws must be "clear and manifest."

Finally, state law is pre-empted to the extent that it actually conflicts with federal law. Thus, the Court has found pre-emption where it is impossible for a private party to comply with both state and federal requirements, or where state law "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress."

English v. General Electric Co., 496 U.S. 72, 78-79 (1990) (citations omitted). In short, preemption can be categorized as either "express preemption," implied "field preemption," or implied "conflict preemption" (which also encompasses the concept of a state law that would frustrate the goals of a federal statute or regulation, even though not in direct conflict).

WLF submits that the Reformed CAFE satisfies all three categories of pre-emption, i.e., express preemption, implied field preemption, and implied preemption due to conflict between the federal and state standards regulating tailpipe CO2 emissions. WLF will focus primarily on express preemption and implied (conflict) preemption.

B. Express Preemption

Congress provided an express preemption provision in EPCA, which states as follows:

(a) General. When an average fuel economy standard prescribed under this chapter is in effect, a State or a political subdivision of a State may not adopt or enforce a law or regulation *related to* fuel economy standards or average fuel economy standards for automobiles covered by an average fuel economy standard under this chapter.

49 U.S.C. 32919(a) (emphasis added).

There can be no doubt that States' regulations of tailpipe CO2 emissions "relate to" fuel economy standards. As NHTSA explained in its prior light truck rulemaking, "as a matter of basic chemistry, the burning of a gallon of gasoline produces about 20 pounds of [carbon dioxide]." 71 Fed. Reg. at 17,659. Indeed, fuel economy standards can be measured, and in fact are measured by EPA by calculating the CO2 emissions from the vehicle and reporting the results to NHTSA. 40 C.F.R. 600.113-93(e). For example, NHTSA's proposed fuel economy standard for each model year is express not only in miles per gallon, but also grams of CO2 emitted per mile. Thus, for MY 2011, the CAFE standard for passenger cars of 31.2 mpg translates to 285g of CO2 per mile, and for MY 2003, the standard of 34.0 mpg translates to 261g of CO2 per mile. 73 Fed. Reg. 24,355.

Accordingly, because almost all of the greenhouse gas emissions from automobiles are CO2, the regulations by California and Vermont that calculate GHG are functionally equivalent to fuel economy measurements. And even if EPA were to give a waiver to states such as California to adopt state standards for GHG, which EPA expressly declined to do in March 2008, that waiver of preemption would only apply to the Clean Air Act and not EPCA.

The Supreme Court has recently reaffirmed unanimously that preemption provisions like those in the federal fuel economy law are to be given maximum breadth, even when a state claims that its purposes are consistent with national objectives. See Rowe v. New Hampshire Motor Transp. Ass'n, 128 S. Ct. 989, 994-995 (2008) (in construing "related to" preemption provision, "it makes no difference whether a state law is consistent or inconsistent with federal regulation") (internal quotation marks and citations omitted). However, it is clear that a State's GHG standard that is stricter than federal CAFE would frustrate the federal agency's objectives in achieving feasible and cost-effective standards.

Lest there be any doubt about the leeway granted to the States in this area, Congress provided a narrow savings clause to the States:

(c) State and political subdivision automobiles. A State or a political subdivision of a State may prescribe requirements for fuel economy for automobiles obtained for its own use.

Thus, States and political subdivisions could use their fleet-purchasing power to require that any vehicles they obtain meet certain fuel economy standards. In practice, that would mean that States are free to require that their agencies purchase vehicles with the highest miles per gallon, or conversely, the lowest CO2 emission rate, of available vehicles on the market. While WLF does not have complete data on the purchasing patterns of all States, it would be useful for NHTSA to survey the States to see if they are taking advantage of this limited savings provision to the maximum extent possible. WLF doubts, however, that California's fleet of over 37,000 vehicles consists of Mini Coopers and Smart Cars, especially not for all purposes. The state police, we are sure, need powerful vehicles that meet certain performance criteria. All too often, federal and state regulators ignore the fact that consumers also have a right to demand vehicles meeting desired performance goals as well. The key point for preemption purposes is that Congress specified a savings clause for States only for making purchases for themselves. Since California's greenhouse gas standards regulate private manufacturing decisions, however, they are outside the protection of the savings clause and well within the scope of EPCA express preemption.

Indeed, there are numerous other ways for California to reduce CO2 emissions from automobiles that are not preempted, such as providing incentives for car-pooling and encouraging driving habits that reduce fuel consumption, such as reduced idling and proper car maintenance, including proper tire inflation, and raising excise taxes on gasoline. But California fosters a culture and identity that affirmatively encourages the use of automobiles within their borders and heavily promotes "automobile tourism," encourages visitors to "hit the road" by taking dozens of statewide "driving tours" spanning thousands of miles. Cal. Travel & Tourism Comm'n, California Drives 2006, at 1 (2006).

Accordingly, it is clear that Congress expressly intended that federal regulation preempt the States from setting the emission standards that "relate to" NHTSA's fuel economy standards. Indeed, it appears from the breadth of express preemption provision and the extensive federal program in this area, that Congress intended that federal law occupy the field of fuel economy regulation, and thus, there is also "field preemption" of state regulation. Indeed, because the field of fuel economy regulation was created by the federal government and has never tolerated significant state presence, there is no basis for NHTSA or courts to apply the presumption against preemption, which requires that the States have historically been empowered to regulate in the relevant field. Moreover, the numerous federal laws enacted over the years since 1978 and other initiatives that address greenhouse gases and global climate change that are administered by other federal agencies, such as EPA, the Department of Energy, and the State Department, leave no doubt that the Congress has legislated national policy on global climate change. By definition, the regulation of CO2 emissions is a global or international issue.³

C. Implied Preemption

Even if there were no express preemption provision, it is clear that NHTSA's CAFE regulations impliedly preempt California and other state's regulations of GHG from automobiles. As discussed, NHTSA's CAFE standards are based on the concept of fleet averaging, which would be disrupted by California's stricter standards and other states that would follow California's standards. Furthermore, NHTSA is required to consider four statutory factors in setting CAFE: technological feasibility, economic practicability, the need of the nation to conserve energy, and the effect of other federal standards. Finally, NHTSA must consider safety in establishing CAFE standards. As previously noted, the National Academy of Sciences estimated at least 1,300 deaths per year attributable to downsizing and downweighting of vehicles to meet earlier CAFE standards. California's regulations do not consider their impact on motor vehicle safety. Clearly, California's standards conflict with federal program that Congress has established to regulate fuel economy of all automobiles in the United States.

Indeed, the Supreme Court has ruled that federal law impliedly preempts state law, even where a savings clause in the federal statute appears to give the states some room to regulate in the area. For example, in *Geier v. American Honda Motor Co.*, 529 U.S. 861 (2000), the issue was whether NHTSA's 1984 air bag rule preempted a state common law tort action alleging that the defendant manufacturer was negligent for not equipping its 1987 Honda with air bags in addition to the manual shoulder and lap belts. The Court concluded that while Congress

⁴ As EPA demonstrated in its March 2008 denial of waiver to California, CO2 from automobiles and other sources are dispersed globally, and thus is more effectively regulated at the national level. 73 Fed. Reg. at 12,161. Global warming, by definition, is global in nature. Hence, "a ton of greenhouse gases emitted in the United States has the same impact as a ton emitted in Malaysia." Norhaus & Danish, Designing a Mandatory Greenhouse Gas Reduction Program for the U.S., Pew Center on Global Climate Change (May 2003) at 2. The percentage of CO2 emissions from the automobiles in the United States is approximately 4 percent of worldwide man-made emissions of CO2. See Chapter 3 in INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS: 1990-2004 (April 2006) USEPA #430-R-06-002. That much smaller percentage is further dwarfed when one considers that according to the Energy Information Administration, man-made generated CO2 constitutes only about 5 percent of the total amount of all carbon dioxide in the atmosphere. See http://www.eia.doe.gov/oiaf/1605/gg96rpt/chap1.htm. Therefore, CO2 emissions from automobiles constitute only .2 percent (4 percent times 5 percent) of total worldwide CO2 emissions from all sources. And when one factors in natural water vapor which, according to the National Climatic Data Center, "is the most abundant greenhouse gas in the atmosphere," and which accounts for almost 95% of the Earth's greenhouse effect, the contribution to total greenhouse gases from automobiles is truly minuscule. See http://www.eia.doe.gov/oiaf/1605/gg/96rpt. As MIT's Richard Lindzen noted, "water vapor is a far more powerful greenhouse gas than carbon dioxide." Fred Guterl, The Truth About Global Warming, Newsweek, July 23, 2001, at 44.

expressly preempted conflicting state statutes or regulations, Congress did not intend that the "savings clause" foreclose the applicability of implied preemption for state law claims. The *Geier* Court concluded that "[n]othing in the language of the savings clause suggests an intent to save state-law actions that conflict with federal regulations," and therefore, the savings clause, "does *not* bar the ordinary working of conflict pre-emption principles." *Id.* at 869 (emphasis in original).⁴

The Geier principles were applied by an unanimous California Supreme Court in Dowhal v. SmithKline Beechman Consumer Healthcare, 32 Cal. 4th 910 (2004). In that case, a tort suit was filed against SmithKline for failing to place notices on their nicotine patch product as required by Proposition 65 (Prop 65) of California. Prop 65 requires, inter alia, warnings on consumer goods that contain a known carcinogen that may cause birth defects or other reproductive harm. The FDA required warnings on the nicotine patch urging pregnant to quit smoking, but the warning noted that the patch was believed to be safer than smoking. The issue in that case was whether the warning requirements of Prop 65 were preempted by the FDA regulation, or whether they were preserved by the savings clause of section 379r(d)(2) of the Food and Drug Administration Modernization Act (FDAMA)

The savings clause in FDAMA expressly stated that the preemptive language of FDAMA shall *not* apply to "a State requirement adopted by a State public initiative or referendum enacted prior to September 1, 1997." The only such initiative fitting that description was Prop 65. Therefore, at first blush, it would appear that the warning on nicotine patches required by Prop 65 would not be preempted by FDAMA. The *Dowhal* Court ruled that the savings clause was evidence that there was no express preemption or implied field preemption. Nevertheless, the Court looked to the *Geier* decision to determine whether there was a conflict preemption. In so doing, the Court noted the similarities between the FDAMA savings clause and that presented in *Geier*, rejecting the argument that the savings clause in *Geier* was different because it dealt with common law claims, while the savings clause in FDAMA referred to a certain state regulations (Prop 65). In determining whether there is a conflict preemption between the FDA label and that required by Prop 65, the *Dowhal* Court concluded:

The FDA's [letter] ruling . . . reflects the concern that Proposition 65 warnings on product labels might lead pregnant women to believe that NRT products were as dangerous as smoking, or nearly so, and thus discourage the women from stopping smoking. Warnings through point-of-sale posters or public advertising could have the same effect of frustrating the purpose of the federal policy. Conflict preemption does not require a direct contradiction between state and federal law; the state law is preempted if state law "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.

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⁵ The Supreme Court reiterated its holding in *Geier* holding just a year later, stating that "neither an express pre-emption provision nor a savings clause 'bars the ordinary working of conflict pre-emption principles." *Buckman v. Plaintiffs' Legal Committee*, 531 U.S. 341 at 352 (2001) (citing *Geier*).

Id. at 929 (citing English v. General Electric Co., 496 U.S. at 79). The Dowhal Court concluded that any warning other than the one required by FDA would conflict with a federal policy that serves a "nuanced goal -- to inform pregnant women of the risks of NRT products, but in a way that will not lead some women, overly concerned about those risks, to continue smoking. This creates a conflict with the [Prop 65's] more single-minded goal of informing the consumer of the risks. That policy conflict justifies federal preemption here." *Id.* at 935. WLF submits that the reasoning and analysis in *Geier* and *Dowhal* are clearly applicable in the instant rulemaking proceeding, which also has a "nuanced goal" of promoting fuel economy by considering and carefully balancing a matrix of factors.

NHTSA explained the nature of the conflict with state regulation of CO2 in its NPRM as follows:

The enactment of EISA has increased the conflict between state regulations regulating CO2 tailpipe emissions from automobiles and EPCA. A conflict between state and federal law arises when compliance with both federal and state regulations is a physical impossibility or when state law stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress. Contrary to the recommendations of NAS, the judgment of NHTSA, and the mandate of Congress, the state regulations regulating CO2 tailpipe emissions, which are equivalent in effect to fuel economy standards, are not attribute-based, thus presenting risks to safety and employment. Contrary also to EISA, the state regulations do not establish separate standards."

73 Fed. Reg. at 24,478 (emphasis in original); see also Average Fuel Economy Standards for Light Trucks -- Model Years 2008-2011, 71 Fed. Reg. 17,566, 17,654-17,670 (April 6, 2006). Clearly, NHTSA's expert judgment on whether there is a conflict is entitled to deference. See, e.g., Hillsborough County Fla. v. Automated Med. Labs., Inc. 471 U.S. 707, 714 (1985).

Indeed, the CAFE standards proposed by NHTSA may provide equal or greater longterm greenhouse gas controls compared to currently promulgated state greenhouse gas standards, when the renewable fuels mandate in title II of EISA is accounted for, according to a peerreviewed publication of the Society of Automotive Engineers.⁵ Nevertheless, manufacturers who achieve compliance with NHTSA's proposed standards will not be able to demonstrate compliance with the state greenhouse gas standards unless they take additional steps. This result occurs because the state greenhouse gas standards impose much higher fuel economy requirements on passenger cars and small trucks (Light Duty Trucks 1 or LDT1s, which have a

⁶ See Darlington and Kahlbaum, "Evaluation of California Greenhouse Gas Standards and Federal Energy Independence and Security Act - Part 2: CO2 and GHG Impacts," Society of Automotive Engineers, 2008-01-1853, 2008 (evaluating Colorado and California).

loaded vehicle weight up to 3,750 lbs) than they do on full-size trucks (LDT2s, which have a loaded vehicle weight in excess of 3,750 lbs). Light duty trucks include most sport utility vehicles (SUVs), vans, and pickup trucks. The imbalanced approach implicit in the state greenhouse gas standards and the comparative differences between the federal and state requirements are shown in Figure below. The data for the charts in these comments are derived from three spreadsheet files being submitted as an attachment with these comments ("Other State or Alternative Sales Mix Compliance Differentials" at A1-A5 and "CA Compliance Differentials" at B1-B4, and "Lifetime CO2 diff PC v. LDT at C1) contains the workbooks in Excel format needed to examine the analysis presented here, and to conduct additional analyses in other States. For this chart, the data was derived from the first spreadsheet file, "Other State or Alternative Sales Mix Compliance Differentials," at A3 ("Fed Cafe With E85").



A further analysis demonstrates the conflict that would arise if the auto industry were required to comply with California GHG standards. Manufacturers would be forced to either market unique car models in the States enforcing the California standards, or engage in "mix shifting," *i.e.*, the use of pricing mechanisms and other quotas to cause customers to choose vehicles they would not otherwise prefer. This can be demonstrated through a simple analysis. In the analysis below, the California new-vehicle market has been used as the case study to illustrate the problems that exist as a result of the overlapping federal CAFE and state greenhouse gas programs.

1. Methodology Used to Examine Regulatory Overlap Between Federal and State Programs

Three main sources have been used to prepare this analysis of regulatory overlap. The fuel economy increases predicted for state greenhouse gas standards have been taken from a

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California Air Resources Board publication.⁶ The fuel economy increases predicted for six major manufacturers under NHTSA's proposed standards have been taken from Chapter VI of the Preliminary Regulatory Impact Analysis. NHTSA's "Adjusted Baseline" values were used, because the public does not have access to the detailed product plan information on which the Adjusted Baseline was based, and so that the analysis could be based entirely on reference values in the public record that were compiled in a consistent manner. In the base case analyzed, the car and truck sales fractions for those six manufacturers were taken from MY 2006 vehicle registration data compiled by R.L. Polk Co., and have been input into the attached spreadsheets. Two scenarios were evaluated. In one scenario, it was assumed that each of the six manufacturers whose situations were evaluated would sell the same fractions of cars and trucks as in MY 2006 in California in MYs 2011-2015. In an alternative scenario, the passenger car sales fractions of each manufacturer was increased, to account for recent shifts in customer demand. This reflects trends in the market since the rapid increase in gasoline prices.⁷

2. Results of the Overlap Analysis

The results of the analysis are contained in the separately submitted files attached hereto, and are shown graphically in the Figures at the top of the next page. The information in the first chart is derived from the table on the second spread sheet attached hereto, "CA Compliance Differentials" at B4, "CA Compliance Diffs" [Tab 4]. The information in the second chart below is derived from the table on the first spread sheet "Other State or Alternative Sales Mix Compliance Differentials" at A5, "Compliance Diffs" [Tab 5]. As indicated in the Figures, in both scenarios, all manufacturers whose situations were studied would have a short-fall from compliance with state greenhouse gas standards, even though they would be meeting the federal fuel economy standards. The short-falls are the highest for the companies with the largest sales fractions of passenger cars, and each company's short-fall is higher in the alternative scenario.

⁷ California's main publication on this issue, entitled "Comparison of Greenhouse Gas Reductions for the United States and Canada Under U.S. CAFE Standards and California Air Resources Board Greenhouse Gas Regulations," is available at www.arb.ca.gov/cc/ccms/reports/pavleycafe_reportfeb25_08.pdf.

⁸ In the alternative scenario, GM's car/truck sales mix was assumed to be 50%/50%, Ford's sales mix was assumed to be 60%/40%, Chrysler's sales mix was assumed to be 45%/55%, Toyota's sale mix was assumed to be 65%/35%, Honda's sales mix was assumed to be 65%/35%, and Nissan's sales mix was assumed to be 60%/40%.



Essentially, there are only two approaches that manufacturers can take in order to demonstrate compliance with the state greenhouse gas standards. One approach is to add technology to its passenger cars and/or to redesign them to achieve higher levels of fuel economy than NHTSA has determined to be "maximum feasible" and consistent with EISA. If state greenhouse gas standards can be enforced in ways that nullify the balance between increases in car and truck fuel economy that NHTSA judges to be necessary, and to require more technology for passenger cars than NHTSA considers to be consistent with federal law and appropriate, those standards are also subject to implied (conflict) preemption. See generally Geier v.

American Honda Co., 529 U.S. 861, 875-881 (2000).

The other approach would be to engage in "mix-shifting" between car and truck product lines in the States in which the greenhouse gas regulations would be enforced. That approach avoids the capital investment requirements and the business risks of the first, technology-based approach. But mix-shifting has many negative consequences of its own, which also create a conflict with the goals and purposes of Congress. Mix-shifts interfere with the level of consumer choice that the standards NHTSA has chosen would provide. Mix-shifts also result in reductions in production levels for the companies who find such a strategy necessary, which is likely to result in net losses in employment in the automobile industry in the United States -- which is an outcome that Congress has directed NHTSA to try to avoid. The history of the federal CAFE program is replete with instances in which NHTSA (with the approval of reviewing courts) has needed to moderate fuel economy standards in order to avoid unnecessary reductions in consumer choice and employment. See, e.g., 51 Fed. Reg. 35,594, 35,615 (Oct. 6, 1986); see also Center for Auto Safety v. NHTSA, 793 F.2d 1322, 1339 (D.C. Cir. 1986) (approving NHTSA decision to "weigh the difficulties of individual manufacturers" in setting and revising fuel economy standards in order to ovoid job losses).

In addition, the overlapping enforcement of state greenhouse gas standards along with federal CAFE standards may well impede the nation's efforts to reduce dependence on foreign oil and greenhouse gas emissions. If NHTSA decides to finalize its proposed truck CAFE standards, each full-size truck that a manufacturer sells that meets the CAFE standard will generate a credit, under the state greenhouse gas regulatory program, that can be used to reduce the fuel economy level that the manufacturer must meet in its passenger car sales. In the simplest terms, the sale of a full-size truck meeting NHTSA's proposed industry average CAFE standard helps a manufacturer to comply with the state greenhouse gas standards, while the sale of a passenger car meeting NHTSA's proposed industry-average CAFE standard hurts compliance with the greenhouse gas standards. The state greenhouse gas standards, if allowed to be operative, would thus have the effect, presumably unintended, of discouraging production of passenger cars and LDT1s for sale, which on average consume *less* gasoline than full-size trucks (LDT2s). The average full-size truck will emit more than six tons of carbon dioxide over its life than the average passenger car. *See* Spreadsheet at C1.

Conclusion

The analysis above illustrates some of the types of conflict that are inherent in any state regulatory program that requires fuel economy levels that differ from those required under federal law by NHTSA. It also bears noting, however, that the preemption of state standards that require the control of carbon dioxide emissions does not depend on whether the state programs are inconsistent with federal requirements. As discussed in these comments and as explained by NHTSA in this NPRM and in 2006 in its Final CAFE Rule for MY 2008-2011 Light Trucks, the state regulations that purport to regulate CO2 emissions from passenger cars and light duty trucks are both expressly and impliedly preempted, and hence NHTSA should issue the proposed appendices with the Final Rule. WLF also urges NHTSA to reconsider the CAFE standards that "front load" fuel economy in earlier years, and to conduct a more robust cost-benefit analysis.

Respectfully submitted,

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Daniel J. Popeo Chairman and General Counsel

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Paul D. Kamenar Senior Executive Counsel

Enclosures

Other State or Alternative Sales Mix Compliance Differentials 7 1 08 Alternative Sales Fractions

		Sales
		Fractions
	PC	50
	LDT1	6
GM	PC+LDT1	56
	LDT2	44
	LDT1+LDT	50
	All	100
	PC	60
	LDT1	6
Ford	PC+LDT1	66
	LDT2	34
	LDT1+LDT	40
	All	100
	PC	45
	LDT1	15
Chrysler	PC+LDT1	60
	LDT2	40
	LDT1+LDT	55
	All	100
	PC	65
	LDT1	6
Toyota	PC+LDT1	71
•	LDT2	29
	LDT1+LDT	35
	All	100
	PC	65
	LDT1	13
Honda	PC+LDT1	78
	LDT2	22
	LDT1+LDT	35
	All	100
	PC	60
	LDT1	0
Nissan	PC+LDT1	60
	LDT2	40
	LDT1+LDT	40
	All	100

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Other State or Alternative Sales Mix Compliance Differentials 7 1.08 FED CAFE NO E85

Based on Required FE levels	(Tables VI-1d and	VI-2d NHTSA PRIA
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2006 \$	Sales Weighted	Fuel Economy	2011	2012	2013	2014	2015
		Sales					
	PC	50	30.00	31.70	32.80	33.70	34.70
	LDT1	6			1		
GM	PC+LDT1	56					
	LDT2	44					
	LDT1+LDT2	50	23.90	25.40	26.50	27.00	27.40
	All	100	26.60	28,20	29.32	29,98	30.62
	PC	60	31.00	32.70	33.70	34,50	35.50
	LDT1	6					
Ford	PC+LDT1	66					
	LDT2	34					
	LDT1+LDT2	40	24,70	26.10	28.00	28.30	28.80
	All	100	28.13	29.70	31.16	31,72	32.48
	PC	45	28.70	29.30	32.20	32,60	33.60
	LDT1	15					
Chrysler	PC+LDT1	60					
	LDT2	40					
	LDT1+LDT2	55	25.20	26.60	28.00	28,50	29.10
	All	100	26.66	27.75	29.75	30.21	30,97
	PC	65	30.10	31.50	32.70	33.60	34.60
	LDT1	6					
Tovota	PC+LDT1	71		· ·			
	LDT2	29					
	LDT1+LDT2	35	24.90	26.00	27.20	27.60	28.00
	Ali	100	28.05	29.33	30.54	31.22	31,96
	PC	65	32.10	33.80	34.80	35.50	36.40
	LDT1	13					
Honda	PC+LDT1	78					
nonda	1.072	22					
	0T1+1 DT2	35	26.10	27.70	28.90	29.20	29.60
		1001	29.71	31.38	32.48	33.01	33.69
	PC	60	31.20	33.20	34.20	35.00	35.90
·	1011						
Niegan	PC+I DT1	60					
110001	1072	40					
	LDT1+LDT2	40	24,90	26.20	27.30	27.70	28,20
	All	100	28.33	29.99	31,06	31.66	32.37

Other State or Alternative Sales Mix Compliance Differentials 7 1 08

FED CAFE With E85

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2006 S	ales Weighted F	uel Economy	2011	2012	2013	2014	2015
			1.20	1.20	1.20	1.20	1.00
	······	· · ·					
		Sales					
	PC	50	28.80	30.50	31.60	32.50	33,70
	LDT1	6					
ĞМ	PC+LDT1	56					
	LDT2	44					
	LDT1+LDT2	50	22,70	24,20	25.30	25.80	26.40
	All	100	25.39	<u>26.99</u>	28.10	28.77	29.61
	PC	60	29.80	31,50	32.50	33.30	34.50
	LDT1	6					
Ford	PC+LOT1	66	1				
	LDT2	34					
	LDT1+LDT2	40	23,50	24.90	26,80	27.10	27.80
	All	100	26.91	28.48	29.95		31.47
	PC	45	27.50	28.10	<u>31,00</u>	31.40	32.60
	LDT1	15					
Chrysler	PC+LDT1	60			×		
	LDT2	40]				
	LDT1+LDT2	55	24.00	25.40	26.80	27.30	28.10
	All	100	25.46	26.55	2 <u>8.</u> 54	29.00	29.96
	PC	65	28.90	30.30	31.50	32.40	33,60
	LDT1	6					
Toyota	PC+LDT1	71					
	LDT2	29					
	LDT1+LDT2	35	23.70	24.80	26.00	28.40	27.00
		100	26,84	28.12	29.33	30.01	30.95
	PC	65	30.90	32.60	33,60	34.30	35.40
	[LDT1	13					
Honda	PC+LDT1	78				·	
	LDT2	22			04 50	00.00	
	LDT1+LDT2	35	24.90	26,50	27.70	28.00	28.60
	All	100	28.50	30.17	31.27	31.80	32.68
	PC	60	30.00	32.00	33,00	33.80	34,90
	LDT1	·					
Nissan	PC+LDT1	60			, · · · ·		
	LDT2	40				60.55	
	LDT1+LDT2	40	23.70	25.00	26.10	26.50	27,20
	All	100	<u>27.12 </u>	28,78	29.84	30.45	31,35

Based on Required FE levels with MAX E85 Adjustments (Tables VI-1d and VI-2d NHTSA PRIA)

Other State or Alternative Sales Mix Compliance Differentials 7 1 08 State

Based on Table 4, 6, 8 of Feb 25 2008 CARB report

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2006 5	ales Weighted	Fuel Economy	2011	2012	2013	2014	2015
			ļ <u> </u>				
	+	Sales	<u> </u>		<u> </u>	<u> </u>	
<u> </u>	PC	50	<u> </u>				
	1.011	6	1				
GM	PC+LDT1	56	32.90	37 60	38.10	39.00	40.60
	LDT2	44	22.50	24 30	24.50	24.90	25.50
	LDT1+LDT2	50					20,00
	All	100	27.33971	30,30247	30.62098	31,22106	32 20819
	PC	60					
	LDT1	6					
Ford	PC+LOT1	66	32.90	37.60	38.10	39.00	40.60
	LDT2	34	22,50	24.30	24.50	24.90	25.50
	LDT1+LDT2	40					
	All	100	28,43179	31.70078	32.05089	32.70358	33,79578
	PC	45					
	LDT1	15					
Chrysler	PC+LDT1	60	32.90	37.60	38.10	39.00	40.60
	LDT2	40	22.50	24.30	24.50	24,90	25.50
	LDT1+LDT2	55					
	Ail	100	27.76632	30.84673	31.17735	31.79764	32.82498
	PC	65					(11 bas
	LDT1	6					
Toyota	PC+LDT1	71	32.90	37.60	38.10	39.00	40.60
	LDT2	29	22.50	24.30	24.50	24.90	25.50
	LDT1+LDT2	35					
	All	100	29.01121	32.44948	32.81711	33.49891	34.64975
	PC	65					
	LDT1	13					
Honda	PC+LDT1	78	32.90	37.60	38.10	39.00	40.60
	LDT2	22	22.50	24.30	24.50	24,90	25.50
	LDT1+LDT2	35					
	All	100	29,86324	33.5591	33,95351	34.67967	35.92048
	PC	60					
	LDT1	-					
Nissan	PC+LDT1	60	32.90	37.60	38.10	39.00	40.60
	LDT2	40	22.50	24,30	24.50	24.90	25.50
	LDT1+LDT2	40					
	All	100	27.76632	30.84673	31.17735	31.79764	32,82498

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Other	State	or	Alternative	Sales	Mix	Compliance	Differentials	7	1	08
Compli	lance 1	Dif	īs.							

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Compliance	e Differentia	als - State G	HG - FED (CAFE									
L													
		2011	2012	2013	2014	2015		2011	2012	2013	2014	2015	
	With E85 No E85												
	<u> </u>					_							
GM	All	1.95	3.32	2.52	2.46	2.60	GM	0.73	2.10	1.31	1.24	1.59	GM
Ford	AII	1.52	3.22	2.10	2.20	2.33	Ford	0.30	2,00	0.89	0.98	1.32	Ford
Chrysler	All	2.31	4.30	2.64	2.79	2.86	Chryster	1.10	3.10	1.43	1.59	1.86	Chrysler
Toyota	All	2.17	4.33	3.49	3.49	3.70	Toyola	0.961433	3.120921	2.278402	2.274671	2.686706	Toyota
Honda	All	1.37	3.39	2.68	2.88	3.24	Honda	0.153666	2.177834	1.474263	1.672183	2.229421	Honda
Nissan	All	0.65	2.07	1.33	1.35	1.47	Nissan	-0.566287	0.852242	0.117474	0.13533	0.459895	Nissan

FED CAFE NO E85

		T	California Fleet							
2006 Sa	les Weighted F	uel Economy	2011	2012	2013	2014	2015			
		California								
		Sales								
	PC	116,021	30.00	31.70	32.80	33.70	34.70			
	LDT1	21,496								
GM	PC+LDT1	137,517								
	LDT2	200,986								
	LDT1+LDT2	222,482	23.90	25.40	26.50	27.00	27.40			
	All	338,503	25.69	27.26	28.37	28.97	29.53			
	PC	143,765	31.00	32.70	33.70	34.50	35,50			
	LDT1	18,704								
Ford	PC+LDT1	162,469								
	LDT2	131,436								
	LDT1+LDT2	150,140	24.70	26.10	28.00	28.30	28,80			
	All	293,905	27.43	28.96	30.53	31.03	31.73			
	PC	55,393	28,70	29.30	32.20	32.60	33,60			
	LDT1	26,635								
Chrysler	PC+LDT1	82,028								
	LDT2	100,609								
	LDT1+LDT2	127,244	25.20	26.60	28.00	28.50	29.10			
	All	182,637	26.17	27.36	29.15	29.63	30.33			
	PC	294,783	30.10	31,50	32.70	33.60	34,60			
	LDT1	28,828								
Toyota	PC+LDT1	323,611								
	LDT2	178,337								
	LDT1+LDT2	207,165	24.90	26.00	27.20	27.60	28.00			
	All	501,948	27.71	28.97	30.18	30.83	31.53			
	PC	148,630	32.10	33.80	34.8D	35.50	36,40			
	LDT1	31,821								
Honda	PC+LDT1	180,451								
	LDT2	64,676								
	LDT1+LDT2	96,497	26.10	27.70	28.90	29.20	29,60			
	All	245,127	29.44	31.10	32.21	32.72	33.38			
	PC	83,017	31.20	33.20	34.20	35.00	35.90			
	LDT1									
Nissan	PC+LDT1	83,017								
	LDT2	71,052								
	LDT1+LDT2	71,052	24.90	26.20	27.30	27.70	28.20			
	Ăll	154.069	27.94	29.56	30,63	31.21	31.88			

Based on Required FE levels (Tables VI-1d and VI-2d NHTSA PRIA)

FED CAFE With E85

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Based on F	Required FE level	s with MAX E85 Ad	justments	(Tables VI-	1d and VI-	2d NHTSA F	PRIA)
0000 0	-Ing VAlais Island I			Ca			
2006 53	ales vveighted i		2011	2012	2013	2014	2015
			1.20	1,20		1.20	1,00
							······
	·[California					
	8	53165	00.00	00.50			40 70
			28.80	30.50	31.60	32,50	33.70
011		21,496	··				
GW	PUTUDI						
		200,900				05.00	
		222,482	22.70	24.20	25.30	25.80	26.40
<u> </u>	AII	338,503	24.48	26.04	27.16	27.76	28.52
		143,765	29.80	31.50	32.50	33.30	34,50
		18,704					
Ford		162,469					
		131,436			00.00		
		150,140	23.50	24.90	26.80	27.10	27.80
		293,905	26.21	27.74	29.31	29.82	30.72
	PC	55,393	27.50	28.10	31.00	31.40	32,60
	LDT1	26,635					
Chrysler	PC+LDT1	82,028					
	LDT2	100,609					
	LDT1+LDT2	127,244	24.00	25.40	26.80	27.30	28.10
		182,637	24.96	26.16	27.95	28.43	29.33
	PC	294,783	28.90	30.30	<u>31.50</u>	32.40	<u>33.60</u>
	LDT1	28,828					
Toyota	PC+LDT1	323,611					
	LDT2	178,337					
	LDT1+LDT2	207,165	23.70	24.80	26.00	26.40	27,00
	All	501,948	26.50	27.76	28.97	29.62	30.52
	PC	148,630	30.90	32.60	33.60	34.30	35.40
	LDT1	31,821					
Honda	PC+LDT1	180,451					
	LDT2	64,676					
	LDT1+LDT2	96,497	24.90	26.50	27.70	28.00	28.60
	All	245,127	28.22	29.89	31.00	31.51	32.37
	PC	83,017	30.00	32.00	33.00	33,80	34,90
	LDT1						
Nissan	PC+LDT1	83,017					
	LDT2	71,052					
	LDT1+LDT2	71,052	23.70	25.00	26.10	26.50	27.20
	All	154,069	26.72	28,34	29.41	29.99	30.87

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CA

Based on Tab										
			California Fleet							
2006	Sales Weighted	Fuel Economy	2011	2012	2013	2014	2015			
		California								
		Sales	_							
	PC	116,021								
	LDT1	21,496								
GM	PC+LDT1	137,517 1	32.90	37.60	38.10	39.00	40.60			
	LDT2	200,986	22.50	24.30	24.50	24.90	25.50			
	LDT1+LDT2	222,482								
	AI	338,503	25.81517	28.37791	28.65542	29.18682	30.03863			
	PC	143,765								
	LDT1	18,704								
Ford	PC+LDT1	162,469	32.90	37.60	38.10	39.00	40.60			
······································	LDT2	131,436	22.50	24.30	24.50	24.90	25.50			
	LDT1+LDT2	150,140								
	All	293,905	27.26425	30.20646	30,52286	31.11941	32.09953			
	PC	55,393								
	LDT1	26,635								
Chrysler	FC+LDT1	82,028	32.90	37.60	38.10	39.00	40.60			
	LDT2	100,609	22.50	24.30	24.50	24.90	25.50			
	LDT1+LDT2	127,244								
	All	182,837	26.223	28.88965	29.17778	29.72702	30.61377			
	PC	294,783								
	LDT1	28,828								
Toyota	PC+LDT1	323,611	32.90	37.60	38.10	39.00	40.60			
	LDT2	178,337	22.50	24.30	24.50	24.90	25.50			
	LDT1+LDT2	207,165								
	AIL	501,948	28.25919	31.47869	31.82367	32.46785	33.54298			
	PC	148,630								
	LDT1	31,821								
Honda	PC+LDT1	180,451	32.90	37.60	38.10	39.00	40.60			
	LDT2	64,676	22.50	24.30	24.50	24.90	25.50			
	LDT1+LOT2	96,497								
	AI	245,127	29.32379	32.85536	33,23268	33.93053	35.11386			
	PC	83,017								
	LOT1									
Nissan	PC+LDT1	83,017	32.90	37.60	38.10	39.00	40.60			
	LDT2	71,052	22.50	24.30	24.50	24.90	25.50			
	LDT1+LDT2	71,052	Ĺ							
	Ali	154,069	27.11919	30.02212	30.33448	30.92429	31.89104			

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CA Compliance Diffs

Complianc	e Differentia	als in Califor	nia - CA GI	G - FED C	AFE								
		I		CA Fleet				I		CA Fleet			
		2011	2012	2013	2014	2015		2011	2012	2013	2014	2015	
				With E85				No E85					
GM	All	1.34	2.33	1.50	1.43	1.52	GM	0.12	1.12	ñ.29	0.21	0.51	GM
Ford	All	1.05	2.46	1.21	1.30	1.38	Ford	-0.16	1.25	0.00	0.09	0.37	Ford
Chrysler	All	1.26	2.73	1.23	1.30	1.29	Chrysler	0.06	1.52	0.02	0.10	0.28	Chryster
Toyola	All	1.76	3.72	2.85	2.85	3.02	Toyota	0.547677	2.508016	1.642439	1.634305	2.010595	Toyota
Honda	All	1.10	2.96	2.23	2.42	2.74	Honda	-0.112333	1.751751	1.021396	1.20964	1.732703	Honda
Nissan	All	0.40	1.68	0.92	0.93	1.02	Nissan	-0.820734	0.464066	-0.295325	-0.282915	0.006066	Nissan

Lifetime CO2 diff PC v LDT 7 1 08 Lifetime CO2 differential

2015 NHTSA STD for PC (mpg) =	35.70
2015 NHTSA STD for LDT(mpg) =	28.60
PC CO2 (g/ml)	247.79
LDT CO2 (g/mi)	309.46
Difference (a/mi)	61 67
Difference (griff)	φ1. φ γ
lifetime mileage	100000.00
(fetime emissions difference (i.e.s.)	8 70
litetime emissions difference (tons)	6.79