



January 13, 2016

Honorable Mark R. Rosekind, Administrator
National Highway Traffic Safety Administration
U.S. Department of Transportation
1200 New Jersey Avenue, S.E.
West Building Ground Floor, Room 12-140
Washington, D.C. 20590-0001

Petition for Rulemaking

Requesting a Regulation to Require the Use of Automatic Emergency Braking Systems for Passenger Motor Vehicles

Consumer Watchdog, the Center for Auto Safety and Joan Claybrook respectfully petition the Administrator of the National Highway Traffic Safety Administration (NHTSA) to initiate a proceeding to promulgate a safety regulation that will require all light vehicles to utilize three established and proven technologies as standard equipment that will help prevent or reduce deaths and injuries from automobile crashes: Forward Collision Warning (FCW), Crash Imminent Braking (CIB), and Dynamic Brake Support (DBS), which NHTSA collectively refers to as Automatic Emergency Braking (AEB). Consumer Watchdog files this petition for rulemaking pursuant to 49 C.F.R. § 552.

Consumer Watchdog is a non-profit, tax-exempt consumer education, litigation, and advocacy organization with over 350,000 supporters nationwide. Established in 1985, Consumer Watchdog advocates on behalf of consumers before regulatory agencies, the legislature and the courts. Since the passage of Proposition 103 by California voters in 1988, the organization has focused particularly on automobile insurance rates and practices.

The Center for Auto Safety is a non-profit public interest organization founded by consumer advocate Ralph Nader and Consumers Union in 1970. The Center has over 15,000 members nationwide. The Center is dedicated to promoting automobile and highway safety, advancing vehicle safety in all vehicles through mandatory safety standards, recalling defective and unsafe automobiles and automobile equipment, and helping make roads safer for motor vehicles through safer designs and traffic controls. The Center testifies before Congress, and petitions federal agencies for remedial action on safety issues.

Joan Claybrook was appointed administrator of the NHTSA by President Jimmy Carter and served from 1977 through 1981. She then served as President of Public Citizen, a national public interest organization based in Washington, D.C. from 1982 to 2009. She is now President Emeritus of Public Citizen.

Summary of Petition

NHTSA is well aware that enhanced automobile safety technologies can prevent or substantially reduce the number of deaths and injuries caused by motor vehicle crashes, estimated at more than 30,000 in 2015.¹ Indeed, in 2015 alone, NHTSA took three major actions that confirm the critical importance of the safety technologies for which petitioners seek the agency's formal mandate.

On October 16, 2015, NHTSA granted a petition by the Center for Auto Safety, Advocates for Highway and Auto Safety, and the Truck Safety Coalition to institute a rulemaking for the purpose of promulgating a mandatory safety standard applicable to trucks and other heavy vehicles. (Federal Motor Vehicle Safety Standard; Automatic Emergency Braking, Docket No. NHTSA-2015-0099.) That rulemaking will consider whether to adopt the three AEB safety technologies as part of a package of mandatory technologies.

On November 2, 2015, NHTSA issued a decision that two of the AEB technologies, Crash Imminent Braking (CIB), and Dynamic Brake Support (DBS), be included as Recommended Advanced Technology Features in its highly-regarded "5-Star Safety Rating System" under the New Car Assessment Program (NCAP), effective for the 2018 model year. (NHTSA, New Car Assessment Program, Docket No. NHTSA-2015-0006.) NCAP assists consumers in making purchasing decisions by scoring vehicles on a variety of performance criteria.

And on December 8, 2015, NHTSA proposed to update the "5-Star Safety Rating System" under the New Car Assessment Program (NCAP) to "keep pace with advancements in occupant protection and the introduction of advanced technologies." (NHTSA, Request for Comments, New Car Assessment Program, Docket No. NHTSA-2015-0119 [NCAP December 2015 Announcement].) Under the proposal, NHTSA's safety ratings will no longer focus exclusively on how vehicles perform in a crash (*crashworthiness*), but will also include *crash avoidance* technologies that prevent or mitigate the impact of a crash, including the three proposed by this Petition: "(1) forward collision warning, (2) crash imminent braking, (3) dynamic brake support...."² commencing with the 2018 model year.

From the point of view of the motorists and pedestrians whose safety is of paramount importance to NHTSA's mission, there is no reason to distinguish between the dangers posed by heavy vehicles, such as trucks, and those posed by light vehicles, such as cars. Seven times as many motorists are killed in light vehicle crashes than in heavy vehicle crashes each year.³

Moreover, NHTSA's determination to rate new cars based on Automatic Emergency Braking is a compelling acknowledgment of its enormous safety value. Indeed, NHTSA estimates that these technologies will prevent thousands of deaths and injuries. Focusing consumer attention on safety technologies through the ratings process is extremely important, and NHTSA's proposed expansion of the rating program to include crash avoidance technologies is laudable. But it is *not* a substitute for protecting consumers through a regulation requiring the deployment of these life-saving technologies.

¹ NHTSA, "Early Estimate of Motor Vehicle Traffic Fatalities for the First Half (Jan – Jun) of 2015," November 2015.

² NCAP December 2015 Announcement, p.101.

³ NHTSA, National Center for Statistics and Analysis.

As helpful as the rating system is when it comes to comparison shopping, a binding regulation is the only way to ensure the minimum safety of *every* motorist on the road, not just those who can afford the most expensive luxury vehicles, which is where these crucial technologies are deployed, often as a component of marketing strategies. A fleet-wide deployment would apply economies of scale such that their cost per car would become insignificant.

For the same reasons, petitioners urge NHTSA to reject the automobile industry's offer to "voluntarily" establish safety standards in place of the mandatory safety regulation requested by this Petition. Such "self regulation" agreements are profoundly inferior to a regulation: they are developed behind closed doors, with no public involvement; are not binding on any company or particular vehicle or model at any given time and can be unilaterally (and secretly) abandoned; cannot be enforced by any members of the public, NHTSA or any other government agency; and often do not reflect objective, scientific or empirical research. Indeed, they are typically the product of industry players seeking to maximize profit and marketing concerns at the expense of robust consumer protection, reflecting the lowest common denominator of industry practice.

As Congress said in 1966, when it created NHTSA: "The promotion of motor vehicle safety through voluntary standards has largely failed."

Now is not the time to permit the automobile industry to regulate itself. With the record number of vehicle recalls in recent years; the Volkswagen and Hyundai fuel economy scandals; and the extraordinarily rapid introduction of new vehicle automation technologies, some of which pose independent and unprecedented social and safety concerns, it is more important than ever that NHTSA proceed through the legal rulemaking process, with its guarantees of science-based decision-making, due process and disclosure. This is the only way to assure public confidence in the agency's actions.

The following are the facts on which the Petition is based.

The Technologies

NHTSA has been studying the AEB technologies since the 1990s. As the agency said last December, "NHTSA believes the greatest gains in highway safety in coming years will result from widespread application of crash avoidance technologies."⁴ "NHTSA believes that certain crash avoidance technologies [including FCW, CIB and DBS] have reached a level of technological maturity and will provide tangible safety benefits at reasonable costs."⁵

Forward Collision Warning (FCW). NHTSA describes this technology as follows:

The FCW system is based on two components: a sensing system capable of detecting a vehicle in front of the subject vehicle, and a warning system sending a signal to the driver. The sensing system consists of forward-looking radar, lidar, camera systems, or a combination thereof. The sensor data are digitally processed by a computer software algorithm that determines whether an object it has detected poses a safety

⁴ NCAP December 2015 Announcement, p. 100.

⁵ *Id.*, p. 101.

risk (e.g., is a motor vehicle, etc.), determines if an impact to the detected vehicle is imminent, decides if and when a warning signal should be sent to the driver, and finally, sends the warning signal. The warning may be a visual signal, such as a light on the dash, an audio signal, such as a chime or buzzer, or a haptic feedback signal that applies rapid vibrations or motions to the driver.... The purpose of the FCW system is to alert the driver to the potential crash threat. The desired corrective action is to have the driver assess the situation, recognize the pending danger, and engage braking or steering to evade the possible rear-end crash event. FCW systems are typically the first technologies deployed in an AEB system currently available in many production motor vehicles.⁶

Crash Imminent Braking (CIB). The next safety technology intervenes when the driver does not respond to the Forward Collision Warning system. CIB automatically applies the brakes through the electronic stability control (ESC) system in order to prevent a collision with another vehicle, or reduce the vehicle's speed at impact. As NHTSA explains:

CIB is one of the earliest generations of automatic braking technologies. When an object in front of the forward-moving [vehicle] is detected, a computer software algorithm reviews the available data from the input signal of the sensing system. If the algorithm determines that a rear-end crash with another motor vehicle is imminent, then a signal is sent to the electronic brake controller to automatically activate the [vehicle's] brakes.⁷

The systems typically consider whether the [] driver has applie[d] the brakes and/or turned the steering wheel before intervening.

Current CIB sensor systems include radar, lidar, and/or vision-based camera sensors capable of detecting objects in front of the vehicle. Although some CIB systems currently in production can detect objects other than vehicles, NCAP test procedures would test the capability of systems to detect and activate only for vehicles in front of the subject vehicle.⁸

Dynamic Brake Support (DBS). DBS technology intervenes when a collision is imminent, and the driver has applied the brakes, but not enough to prevent impact. NHTSA describes DBS as follows:

DBS applies supplemental braking in situations in which the system has determined that the braking applied by the driver is insufficient to avoid a collision. Typically, DBS relies on information provided by forward-looking sensor(s) to determine when supplemental braking should be applied. FCW most often works in concert with DBS by first warning the driver of the situation and thereby providing the opportunity for the driver to initiate the necessary braking. If the driver's brake application is insufficient, DBS provides the additional braking needed to avoid or mitigate the crash.

⁶ *Id.*, p. 109.

⁷ *Id.*, p. 114.

⁸ *Id.*, p. 113.

DBS is similar to CIB; the difference is that CIB activates when the driver has not applied the brake pedal, and DBS will supplement the driver's brake input. When an object in front of the forward-moving [vehicle] is detected, a computer software algorithm reviews the available data from the input signal of the sensing system. If the algorithm determines that a collision with an object in front of the [vehicle] is imminent and that the driver has applied the brakes, but not adequately, a signal is sent to the electronic brake controller. Then the brake system automatically provides additional braking.⁹

Estimated Safety & Financial Benefits

NHTSA estimates there are approximately 1.7 million rear-end passenger auto crashes each year; “[t]hese crashes involve an estimated 2,700,000 persons per year, and a total annual cost of \$47 billion. More than 400,000 people are injured and over 200 people are killed in rear-end crashes each year.”¹⁰ In a June 2012 report NHTSA calculated that the three safety technologies requested by this Petition – FCW, DBS and CIB – could potentially avoid or mitigate 910,000 rear-end crashes per year, “preventing 94,000 – 145,000 minor injuries, 2,000 – 3,000 serious injuries, and save 78 – 108 lives annually.”¹¹

The National Transportation Safety Board (NTSB), known to most Americans for its role in supervising the airline industry and maintaining a zero tolerance approach to aviation crashes, published a “Special Investigative Report” in May 2015 on rear-end crashes. The NTSB concluded that “many of these crashes could have been mitigated, or possibly even prevented, had rear-end collision avoidance technologies been in place.”¹²

Then NTSB proceeded to make an unusually pointed statement about its sister agency:

[S]low and insufficient action on the part of the National Highway Traffic Safety Administration (NHTSA) to develop performance standards for these technologies and require them in passenger and commercial vehicles, as well as a lack of incentives for manufacturers, has contributed to the ongoing and unacceptable frequency of rear-end crashes.¹³

NTSB called on auto manufacturers to install AEB systems as standard equipment in all new vehicles.¹⁴ And it pointed out that the AEB technologies would assist “future integration with connected-vehicle technology, which offers an even broader spectrum of safety coverage for drivers.”¹⁵ A number of other NTSB’s recommendations have since been adopted by NHTSA.

⁹ *Id.*

¹⁰ NHTSA, Automatic Emergency Braking System (AEB) Research Report, August 2014, p. 9.

¹¹ NCAP December 2015 Announcement, p.108, 110-111 (citations omitted).

¹² National Transportation Safety Board, “The Use of Forward Collision Avoidance Systems to Prevent and Mitigate Rear-End Crashes: Special Investigation Report,” May 19, 2015, p. 6.

¹³ *Id.*

¹⁴ *Id.*, p. 37.

¹⁵ *Id.*, p. 36.

NHTSA has quantified the human and economic savings from each of the AEB technologies in the context of its proposal to include AEB technologies in its NCAP safety rating system.

	Deaths	Serious Injuries	Minor Injuries
FCW	35	1,260	53,000
CIB	40	640	40,000
DBS	25	21,100	107,000

Source: NCAP December 2015 Announcement, p. 110-118.

A Regulation Is Necessary

Petitioners are aware that automobile manufacturers would prefer to set voluntary standards or guidelines for the introduction of these safety technologies in lieu of a regulation. There are nine compelling reasons why the agency should reject that approach.

1. **Safety.** Requirements developed by the agency, under its statutory authority, through the public rulemaking process and subject to judicial review, ensure that the proposed technologies are thoroughly vetted and reflect the best our nation can produce. Subsequent agency activities – such as compliance testing, monitoring and enforcement – can ensure that safety issues or defects are rapidly flagged and addressed. By contrast, “voluntary standards” are often dictated by marketing and other financial concerns that ignore or marginalize safety and reflect merely the minimum consensus of those manufacturers interested in participating or which wield decision-making power within the industry. Nothing requires that the “voluntary standards” reflect objective, scientific or empirical research or testing. Such agreements also typically enumerate “exemptions” that manufacturers may invoke at their whim. The result is an inferior level of performance and protection. The agency and the public are essentially bystanders with no real role in the process.

2. **Public participation.** Regulations are the product of a process that permits public scrutiny and participation. Members of the public and public interest organizations can review, comment upon and challenge both industry and agency assumptions and arguments, including through independent safety experts if necessary. Such a process both ensures that the agency’s decision-making benefits from the input of all interested parties, and encourages public and taxpayer confidence in the agency. “Voluntary standards” are developed in secret, behind closed doors with no public disclosure or participation and hence no opportunity for consumers to assess the validity or quality of the “standards.”

3. **Public Disclosure.** Mandatory safety technologies are accompanied by an extensive set of disclosure requirements that inform and assure the public of the vehicle’s safety capabilities. By contrast, consumers have no idea what “voluntary standards” apply to any particular make and model of a manufacturer; indeed, the vast majority of consumers will be completely unaware of such standards. No rules require, much less govern, the disclosure of “voluntary standards” in advertising and at dealerships. And because there is no legal requirement that vehicles comply with the “voluntary standards,” there is no way to know whether a particular vehicle does so.

4. **Assured, Uniform Deployment.** Only a binding regulation can ensure that these critical safety

technologies are deployed by all manufacturers across their fleets, on all makes and models. Industry-generated “voluntary standards” are not mandatory. Manufacturers can decline to participate entirely, delay their participation, choose to limit which vehicle models comply, and secretly abandon or withdraw their participation at any time.

5. Equity in Safety Regulation. “Voluntary standards” permit manufacturers to treat safety technologies as “optional equipment” or exclude them altogether from less expensive models. Manufacturers typically package advanced safety technologies with other, expensive extras as a marketing strategy, allowing manufacturers to cater to and profit from wealthy consumers able to purchase luxury vehicles. Meanwhile, middle or low-income individuals are, as a practical matter, unable to afford those options and thus are denied the protection of the safety technologies.

Studies show that motor vehicle crashes have a disproportionate impact on the poor and vulnerable in society. These are also the people with usually little influence over policy decisions. Even in high-income countries, poor children are at greater risk than children from more prosperous families. This issue of equity is a central one for reducing the global burden of road crash death and injury.¹⁶

Equity matters in a democracy. Permitting the industry to favor financially advantaged segments of the U.S. population with greater safety protections would lead to unnecessary deaths and injuries. NHTSA should explicitly recognize the goal of assuring that *all* motorists are protected by available safety technologies, not just those in higher income brackets.

6. Lowering the Cost of the Technology. Requiring the safety technologies to become standard equipment also substantially reduces the cost to manufacturers and consumers. The economies of scale inherent in fleet-wide deployment will dramatically lessen the price.

7. Rapid Deployment. A federal safety regulation is the only method to assure the rapid fleet-wide deployment of the AEB technologies requested by this Petition. A frequently mentioned example is the introduction of Electronic Stability Control (ESC). This technology had been commercially available since 1995, but ten years later it was standard equipment on only 29% of vehicles. In other words, most manufacturers did not voluntarily adopt ESC. It was not until Congress mandated the technology as standard equipment in 2005, and NHTSA adopted the necessary regulation in 2007, that manufacturers began to incorporate the technology in a majority of cars – well in advance of the 2011 deadline.¹⁷ As stated by the organizations that successfully petitioned NHTSA for a regulation mandating AEB technologies as standard equipment in trucks, “In light of the substantial safety benefits afforded by ESC, every year of unnecessary delay added a year in which the significant safety benefits of ESC were denied to the public because fewer vehicles were equipped with this life-saving technology.”¹⁸

¹⁶ World Health Organization, *World Report On Road Traffic Injury Prevention*, 2004, p.10.

¹⁷ Insurance Institute for Highway Safety, “ESC And Side Airbag Availability By Make And Model,” <http://www.iihs.org/iihs/ratings/safety-features>; Center for Auto Safety and Advocates for Highway and Auto Safety, Petition for Rulemaking: Requesting Issuance of a Rule to Require the Use of Forward Collision Avoidance and Mitigation Systems for Commercial Motor Vehicles, February 19, 2015, p. 5-7.

¹⁸ *Id.* at 7.

8. Enforceability. A NHTSA regulation has the force of law. The agency, and consumers, may go to court if necessary to force a manufacturer to comply with the regulation. NHTSA has the authority to require a recall of vehicles not in compliance with regulatory requirements; often the threat of a non-compliance recall order leads the manufacturer to agree to a recall. By contrast, neither NHTSA nor consumers have the authority to monitor compliance with “voluntary standards”; nor are they enforceable by either NHTSA or by consumers: there is no recourse if a manufacturer fails to observe or even wantonly violates a “voluntary standard.”¹⁹

9. Public Confidence in NHTSA in a Challenging Era. Congress enacted the National Traffic and Motor Vehicle Safety Act in 1966 “to reduce traffic accidents and deaths and injuries resulting from traffic accidents.” The analysis of the proposed legislation by the U.S. Senate concluded that:

The promotion of motor vehicle safety through voluntary standards has largely failed. The unconditional imposition of mandatory standards at the earliest practicable date is the only course commensurate with the highway death and injury toll.²⁰

To achieve the goals of the legislation, Congress established the federal agency that is now known as NHTSA and authorized it to promulgate safety regulations such as those proposed by this Petition. The inadequacy of “voluntary standards” was precisely the problem that Congress sought to resolve when it enacted the National Traffic and Motor Vehicle Safety Act.

Today, NHTSA faces two extraordinary challenges that strongly counsel against NHTSA’s deference to “voluntary” safety standards proposed by industry.

First, there has recently been a disturbing deterioration in vehicle quality, accompanied by a marked decline in auto industry compliance with federal safety and environmental protection laws.

There were a record 801 separate recalls involving 63.7 million vehicles in 2014, and 613 recalls of 40 million vehicles as of mid-2015.²¹ Three of the largest recalls in recent years illustrate the importance of NHTSA’s work – and the need for the agency to exercise its full enforcement authority. Defective ignition switches in GM cars have taken the lives of 174 Americans and injured more than 200;²² the company vehemently denied wrongdoing for more than a decade, until it finally

¹⁹ As Congress made clear last year, even if NHTSA were to adopt the industry’s “voluntary standards” as “guidelines,” they would not be enforceable by the agency or consumers. (“No guidelines issued by the Secretary with respect to motor vehicle safety shall confer any rights on any person, State, or locality, nor shall operate to bind the Secretary or any person to the approach recommended in such guidelines.” Fixing America’s Surface Transportation (FAST) Act, Section 24406, Pub. L. 114-94.)

²⁰ Committee Report on S. 3005, The Traffic Safety Act of 1966, June 23, 1966, at 274.

²¹ NHTSA, 2014 Vehicle Recalls by Manufacturer (available at <http://www.safercar.gov/Vehicle+Owners/vehicle-recalls-historic-recap>); 2015 data: Statement Of Joan Claybrook Consumer Co-Chair Advocates For Highway And Auto Safety, on “Examining Ways To Improve Vehicle And Roadway Safety” before the Committee On Energy And Commerce Subcommittee On Commerce, Manufacturing And Trade, October 15, 2015, p. 2.

²² “NHTSA Admits Faults In GM Investigation,” Detroit News, June 5, 2015 (<http://www.detroitnews.com/story/business/autos/general-motors/2015/06/05/gm-nhtsa->

agreed to recall 1.55 million vehicles in 2014 and agreed to pay \$595 million to a legal fund for victims and \$900 million in criminal penalties in 2015.²³ Exploding Takata air bags are known to have killed 8 and injured 100 others;²⁴ 34 million cars have been recalled – the largest recall in history²⁵ – as a result. Multiple investigations are underway. The Department of Justice ordered Toyota to pay a \$1.2 billion penalty as part of a settlement of criminal charges against the company for making fraudulent public statements denying reports of unintended acceleration that had killed 37; as of July 2015, the company had settled 383 civil cases alleging deaths and catastrophic injuries and agreed to pay up to \$1.1 billion in compensation for decreases in the value of 23 million vehicles.²⁶ In each of these cases, the agency has been criticized for failure to timely investigate and respond to public complaints.

Nor has corporate misconduct been confined to safety requirements. In recent years, two major automobile manufacturers have been exposed for manipulating the fuel economy of their vehicles, defrauding American consumers and polluting the nation’s environment. In 2012, following a complaint to the Environmental Protection Agency by Consumer Watchdog,²⁷ EPA determined that Hyundai and Kia had inflated the fuel economy of a large number of their vehicles. In 2014, the two companies agreed to pay a record \$100 million, cover \$50 million in other costs, and forfeit emissions credits worth \$200 million.²⁸ The U.S. Attorney General described the penalties as a “strong message that cheating is not profitable.”²⁹ Volkswagen’s admission in 2015 that the company engineered the software on its diesel vehicles to cheat when the cars were undergoing

[report/28540239/](#)); “Why General Motors’ \$900 Million Fine For A Deadly Defect Is Just A Slap On The Wrist,” Washington Post, September 17, 2015 (<https://www.washingtonpost.com/news/business/wp/2015/09/17/why-general-motors-900-million-fine-for-a-deadly-defect-is-just-a-slap-on-the-wrist/>).

²³ “U.S. Government Sues Volkswagen Over Cheating On Emissions Tests,” Los Angeles Times, January 4, 2016 (<http://www.latimes.com/business/la-fi-volkswagen-emissions-lawsuit-20160104-story.html>).

²⁴ “Everything You Need to Know about the Takata Airbag Recall,” Consumer Reports, December 23, 2015 (<http://www.consumerreports.org/cro/news/2014/10/everything-you-need-to-know-about-the-takata-air-bag-recall/index.htm?loginMethod=auto>).

²⁵ “Airbag Recall Widens to 34 Million Cars as Takata Admits Defects,” New York Times, May 19, 2015 (<http://www.nytimes.com/2015/05/20/business/takata-airbag-recall.html>).

²⁶ “Toyota Says It’s Settled 338 Cases So Far In Acceleration MDL,” Law360, July 22, 2015 (<http://www.law360.com/articles/681915/toyota-says-it-s-settled-338-cases-so-far-in-acceleration-mdl>).

²⁷ “Consumer Watchdog Urges EPA to Re-Test Elantra 40 MPG Claim, Hold Hyundai to Account,” Consumer Watchdog, December 1, 2011 (<http://www.consumerwatchdog.org/newsrelease/consumer-watchdog-urges-epa-re-test-elantra-40-mpg-claim-hold-hyundai-account>).

²⁸ Environmental Protection Agency, “United States Reaches Settlement with Hyundai and Kia in Historic Greenhouse Gas Enforcement Case,” November 3, 2014, p.1.

²⁹ U.S. Dept. of Justice, “Remarks For Attorney General Eric H. Holder, Jr. Press Conference Announcing Settlement with Hyundai And Kia,” November 3, 2014. (<http://www.justice.gov/opa/speech/remarks-attorney-general-eric-h-holder-jr-press-conference-announcing-settlement-hyundai>).

emissions tests³⁰ has led to an international scandal; in January, the U.S. Department of Justice sued Volkswagen, Audi and Porsche, which could face up to \$18 billion in fines.³¹

NHTSA's second challenge is a marketplace that is evolving at a speed unprecedented since the advent of the modern automobile. By many accounts, the automobile industry is entering a period of momentous change. At the extreme are Google and other high tech corporations that insist that fully autonomous robot controlled cars will be operating on the roads within a few years. Much more likely is that the intervention of corporations traditionally outside the automobile industry will lead to a surge in the development of new vehicle technologies, some of which pose independent and unprecedented social as well as safety concerns.³²

It is already clear, for example, that the high tech industry views automobiles as virgin territory in which to deploy personal data collection and marketing practices that are now commonplace online. These practices are highly controversial, raising enormous privacy concerns that the industry has refused to meaningfully address.

Similarly, software algorithms will play a preeminent role in the future of transportation as robot car technologies are rolled out.

These are paradigm-changing events, requiring cautious, careful and thorough oversight that can only be achieved through traditional regulation. Seemingly gone are the days when the auto industry would vigorously resist safety systems like air bags. But where there was once recalcitrance among old school auto companies, some of the tech corporations new to the auto industry, such as Google, manifest a distinct impatience with the formalities of lawmaking in a democracy.³³

The only way to ensure that public safety remains the preeminent and paramount consideration for a broadened automobile industry on the cusp of major changes is to carefully regulate the introduction and deployment of the new technologies through the legal rulemaking process, which guarantees the due process and disclosure rights that will maintain public confidence in NHTSA and the nation's motor vehicle transportation system. NHTSA should not sideline itself by acquiescing to private

³⁰ "VW Says Emissions Cheating Was Not a One-Time Error," The New York Times, December 10, 2015 (http://www.nytimes.com/2015/12/11/business/international/vw-emissions-scandal.html?_r=0).

³¹ "U.S. Government Sues Volkswagen Over Cheating On Emissions Tests," Los Angeles Times, January 4, 2016 (<http://www.latimes.com/business/la-fi-volkswagen-emissions-lawsuit-20160104-story.html>).

³² "California Is A Long Way From Driverless Cars, Consumer Watchdog Tells Insurance Commissioner," Consumer Watchdog, October 2, 2014 (<http://www.consumerwatchdog.org/newsrelease/california-long-way-driverless-cars-consumer-watchdog-tells-insurance-commissioner>).

³³ "Google 'Gravely Disappointed' With California's New Rules for Self-Driving Cars," Re/Code, December 16, 2015 (<http://recode.net/2015/12/16/google-gravely-disappointed-with-californias-new-rules-for-self-driving-cars/>); "New DMV Robot Car Rules Prioritize Safety; Follow Consumer Watchdog's Call To Require Steering Wheel And Pedals; Privacy & Cybersecurity Also Addressed," Consumer Watchdog, December 16, 2015 (<http://www.consumerwatchdog.org/newsrelease/new-dmv-robot-car-rules-prioritize-safety-follow-consumer-watchdog-s-call-require-steeri>).

self-regulation, especially at this critical juncture.

Inclusion of the Technologies in the 5-Star Rating System is Not a Substitute for a Regulation

Finally, inclusion of the AEB technologies in the 5-Star Rating System – NCAP – is not a substitute for a binding regulation, nor was it ever intended to be. As NHTSA has explained, NCAP is intended to “encourage motor vehicle manufacturers to make vehicle safety improvements”³⁴ beyond the existing minimum federal standards. Though indisputably useful for consumers for purposes of comparison shopping, and without detracting from the substantial competitive incentives it applies to manufacturers to adopt safety technologies, NCAP is principally a mechanism for influencing the behavior of savvy shoppers and manufacturers. Focusing attention on safety technologies through the ratings process alone is not a substitute for protecting consumers through a regulation requiring the deployment of these life-saving technologies.

A binding regulation is the only way to ensure the minimum safety of *every* motorist on the road, not just those who can afford the most expensive luxury vehicles, where these crucial technologies are deployed, often as a component of marketing strategies.

Conclusion

Our nation’s commitment to vehicle safety technologies has saved over 600,000 lives since 1960, according to NHTSA’s estimate.³⁵ The three safety technologies that this Petition requests be made mandatory for light vehicles – Forward Collision Warning, Crash Imminent Braking and Dynamic Brake Support – are established and proven: NHTSA has studied them extensively, has agreed to consider whether they should be mandatory for trucks, and incorporated them into its NCAP safety ratings program. The automobile industry is currently installing the technologies in some production vehicles. Analyses of the benefits of these technologies confirm that their adoption as standard equipment would produce very significant safety and financial benefits for Americans. Therefore, petitioners Consumer Watchdog, Center for Auto Safety and Joan Claybrook request that the NHTSA prescribe and adopt by rule performance requirements and standards for the mandatory installation of these safety technologies in passenger vehicles.

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³⁴ NCAP December 2015 Announcement, p.1.

³⁵ “Lives Saved by Vehicle Safety Technologies and Associated Federal Motor Vehicle Safety Standards, 1960 to 2012,” NHTSA, January 2015, p.xix.