

No. 02-4237

IN THE UNITED STATES COURT OF APPEALS
FOR THE SECOND CIRCUIT

PUBLIC CITIZEN, INC.,
NEW YORK PUBLIC INTEREST RESEARCH GROUP,
and CENTER FOR AUTO SAFETY,
Petitioners,

v.

NORMAN Y. MINETA,
SECRETARY OF TRANSPORTATION,
Respondent.

On Petition For Review
Of A Final Rule Issued By Respondent
Secretary Of Transportation

BRIEF FOR PETITIONERS

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DISCLOSURE STATEMENT

Petitioners Public Citizen, Inc., New York Public Interest Research Group, and the Center for Auto Safety are non-profit corporations that have no parents, subsidiaries, or affiliates that have issued shares or debt securities to the public.

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PRELIMINARY STATEMENT

This petition for review is from a rule issued by the Administrator of the National Highway Traffic Safety Administration (“NHTSA”), Jeffrey W. Runge. The rule and supporting commentary are published at 67 Fed. Reg. 38704 (2002).

INTRODUCTION

Driving on underinflated tires is both dangerous and common. More than one third of the passenger cars and light trucks on the road have at least one tire underinflated by 20 percent; more than one quarter have at least one tire underinflated by 25 percent, and one fifth have at least one tire underinflated by 30 percent. To address this problem, Congress, in the Transportation Recall Enhancement, Accountability, and Documentation Act (“TREAD Act”), directed the Secretary of Transportation to promulgate a rule requiring a warning system in new vehicles to alert the driver when a tire is significantly underinflated.

During the course of its rulemaking, NHTSA, to which the Secretary delegated this task, identified two types of available systems to detect underinflated tires. One system warns a driver when any one tire or any combination of tires is 20 percent or more underinflated as compared to the auto manufacturer’s recommended tire pressure. It functions as soon as the vehicle is turned on, operates effectively on any type of road surface, and can be installed in any vehicle. The other system, which works with a vehicle’s anti-lock braking system, warns a driver when any single tire

is or when three tires are 30 percent or more underinflated as compared to the other tires. It cannot detect when all four tires or when two tires on the same side or the same axle are underinflated. It does not function until the vehicle has been driven for up to ten minutes; it does not function at speeds above 70 miles per hour, and it does not function on bumpy or gravel roads. The system cannot detect 30 percent underinflation in half of the instances in which it occurs.

According to NHTSA's estimates, if installed in all light vehicles, the first system would prevent 141 to 145 deaths and prevent or reduce the severity of more than 10,270 injuries each year. If all light vehicles with anti-lock brakes used the second system and the remaining vehicles used the first system, only 79 deaths would be prevented and 5,176 injuries prevented or reduced in severity.

Notwithstanding NHTSA's express recognition that the first system is more reliable and effective and, therefore, that it would better fulfill the purposes of the statute, NHTSA's final rule allows manufacturers to install either system and includes a 4½-year phase-in period during which manufacturers can comply with the rule using the inferior system almost exclusively. Because it allows manufacturers to use a tire pressure monitoring system that does not meet the requirements established by Congress and because, given the phase-in schedule, many new vehicles will not have an effective monitoring system years after the statutory deadline, the final rule violates the TREAD Act and is arbitrary and capricious.

JURISDICTION

The agency promulgated the rule at issue here pursuant to section 13 of the TREAD Act, Public Law 106-414, 114 Stat. 1806 (49 U.S.C. § 30123 note). The rule is dated May 30, 2002, and was published in the Federal Register on June 5, 2002. Petitioners timely filed a petition for review in this Court on June 26, 2002. This Court has jurisdiction under 49 U.S.C. § 30161(a). Venue lies in this Court under the same statute because petitioner New York Public Interest Research Group resides in New York.

ISSUES PRESENTED

1. Whether NHTSA's final rule implementing the tire pressure monitoring system requirement of the TREAD Act is contrary to law because it allows manufacturers to install a monitoring system that fails to achieve the statutory requirement that new vehicles have a system to warn drivers when "a tire is significantly under inflated" and does not require a tire pressure monitoring system that meets the statutory requirements to be installed in new vehicles "not later than 2 years after the date of completion of [the] rulemaking," as required by the Act.

2. Whether NHTSA's final rule implementing the tire pressure monitoring system requirement of the TREAD Act is arbitrary and capricious because it allows use of a monitoring system that is far less effective than another available system that fulfills the requirements and purposes of the Act.

3. Whether NHTSA acted arbitrarily and capriciously by failing to require detection of 20 percent underinflation when an existing system can detect 20 percent underinflation, the record demonstrates that 20 percent underinflation is significant, and the decision not to impose a 20 percent standard was based only on the agency's finding that the other existing system, even if improved, could not detect underinflation of less than 25 percent.

STATEMENT OF THE CASE

A. THE HAZARDS OF UNDERINFLATED TIRES

Tire underinflation became an issue of national concern when, between 1996 and 2000, Firestone received a large number of reports of tread separation in certain of its tires used primarily on the Ford Explorer and other Ford models. The tread separation caused many accidents, resulting in more than 200 deaths and 700 injuries. A-91 (66 Fed. Reg. 38982, 38989 n.13 (2001)).¹ One of the factors that contributed to the tread separation was underinflation of the tires, as Ford had recommended that vehicle owners maintain a lower level of inflation than was safe. Firestone was eventually forced to recall millions of tires. *See* NHTSA, Preliminary Economic Assessment,

¹Cites to 66 Fed. Reg. refer to NHTSA's notice of proposed rulemaking, which appears in the Joint Appendix beginning on page A-84. Cites to 67 Fed. Reg. refer to NHTSA's notice of its final rule, which appears in the Special Appendix beginning on page SPA-9.

FMVSS No. 139 at 1 (Oct. 2001) (available at www.nhtsa.dot.gov/cars/rules/rulings/UpgradeTire/Econ).

Tires are designed to perform at specific levels of inflation pressure. When a vehicle's tires are maintained at lower levels of inflation, the vehicle may drive more smoothly. However, as Congress learned during its investigation into the Firestone tire recall, underinflated tires present several problems. First, they pose safety risks. Significantly underinflated tires "flex more and the air temperature inside the tire increases, increasing stress and the risk of failure." 67 Fed. Reg. 38713. Underinflated tires also lose lateral traction, which makes handling a vehicle more difficult. *Id.* at 38713-14. Significantly underinflated tires thus contribute to crashes resulting from tire blow-outs, flat tires, increased stopping distance, skidding and/or loss of control of the vehicle on a curve or during a lane change, and hydroplaning on wet surfaces. *Id.* at 38714, 38739. NHTSA estimates that alerting drivers to the fact that their tires are underinflated could prevent many fatalities and thousands of injuries each year. *Id.* at 38739.

Second, underinflation reduces the tread life of tires by causing the tread to wear both incorrectly and more rapidly than it would on properly inflated tires. One survey cited by NHTSA indicated that, on average, tires on passenger cars could lose about 5,440 miles of tread life and tires on light trucks about 6,960 miles of tread life because of underinflation. *Id.* at 38715.

Third, underinflated tires decrease fuel economy. NHTSA cited data showing that a vehicle's fuel efficiency is reduced by one percent for every 2.96 psi that its tires are below the proper pressure. *Id.* And according to an EPA study, a one percent improvement in fuel economy would save about 1.3 billion gallons of gasoline. A-252 at n.4 (comment of Rubber Manufacturers Association).

In February 2001, NHTSA's National Center for Statistics and Analysis conducted a survey "designed to assess the extent to which passenger vehicle drivers are aware of the recommended air pressure for their vehicles' tires, if drivers monitor air pressure, and to what extent actual tire pressure differs from placard pressure." 67 Fed. Reg. 38713. The survey found that 38 percent of passenger cars and light trucks had at least one tire that was at least 20 percent below the placard pressure; 27 percent had at least one tire that was at least 25 percent below the placard pressure, and 20 percent had at least one tire that was at least 30 percent below the placard pressure. A-87 (66 Fed. Reg. 38985); 67 Fed. Reg. 38718.

B. TYPES OF TIRE PRESSURE MONITORING SYSTEMS

Currently, two types of tire pressure monitoring systems, referred to in the rulemaking as "TPMSs," are produced and in use: direct systems and indirect systems.

Direct Systems: Direct TPMSs use pressure sensors located in each wheel to measure the pressure in each tire. When the system detects one underinflated tire or any combination of underinflated tires up to all four, it alerts the driver. The alert can

vary among direct systems, from a simple warning light to a display that shows the pressure and temperature in each tire. Direct systems can also work with a spare tire. Direct TPMSs work as soon as a vehicle is turned on, whether the vehicle is stationary or in motion. Current direct systems can detect underinflation of 20 percent below the vehicle manufacturer's recommended cold inflation pressure—or “placard pressure”—although some can detect smaller levels of pressure loss. Direct systems do not give false positives. They must be reset after the vehicle's tires are replaced, and the sensor locations must be changed when the tires are rotated. 67 Fed. Reg. 38716; A-89-A-90 (66 Fed. Reg. 38987-88).

Indirect Systems: Indirect TPMSs work with anti-lock braking systems, which are currently installed in approximately 67 percent of new vehicles. 67 Fed. Reg. 38740. Anti-lock brakes use wheel speed sensors to measure the rotational speed of each wheel. As tire pressure decreases, rolling radius decreases and the rotational speed of the wheel increases. By comparing the sum of the wheel speeds on each diagonal, indirect systems detect differences in inflation levels. However, indirect systems cannot identify which tire is underinflated. They also cannot detect when all four tires are underinflated, when two tires on the same axle are underinflated, or when two tires on the same side of the vehicle are underinflated. In addition, indirect TPMSs may incorrectly indicate underinflation when a vehicle is being driven on a bumpy road

or at a speed of more than 70 miles per hour, or when a vehicle has mismatched tires or a tire out of alignment. *Id.* at 38716; A-89-A-90 (66 Fed. Reg. 38987-88).

When indirect TPMSs detect underinflation, they convey the information to the driver by a warning light that does not identify which tire is underinflated. Indirect systems do not operate unless the vehicle is moving and can take up to ten minutes to detect underinflation. Current indirect systems cannot detect underinflation until the pressure in one tire is about 30 percent below the pressure in the other tires. 67 Fed. Reg. 38716, 38728; A-89-A-90 (66 Fed. Reg. 38987-88).

Indirect TPMSs also need from several minutes to several hours to calibrate when a vehicle is driven for the first time, when a tire is changed, and when tires are rotated. During the calibration, the system will not indicate either that it is in calibration mode or that a tire is low. Moreover, if a driver accidentally hits the system's reset button when a tire is low, the system will recalibrate to accept the underinflated condition as normal and, consequently, will not indicate underinflation until the pressure in one tire (or three tires) falls to 30 percent below the level of pressure in the low tire at the time of recalibration. *Id.*

Relative Costs: For vehicles that do not have anti-lock brakes, direct systems are cheaper to install. For vehicles that have anti-lock brakes, indirect systems are cheaper to install. NHTSA estimates the average cost per vehicle of providing a direct TPMS to be \$69.95 with a display that indicates the pressure in each tire and \$65.84

with a simple warning light. NHTSA estimates the cost of providing an indirect TPMS to be \$21.13 if the vehicle already has anti-lock brakes and \$253.29 if the manufacturer installs an indirect system and anti-lock brakes. 67 Fed. Reg. 38740. As for maintenance costs, NHTSA assumes that indirect systems have no maintenance costs. In current direct systems, the battery and sensors must be replaced every five to ten years, or every 90,000 to 100,000 miles, at an estimated cost of \$40.91 per vehicle, although batteryless direct TPMSs have been developed as well. *Id.* at 38741.²

STATEMENT OF THE CASE

A. NHTSA'S PROPOSED RULE

On November 1, 2000, Congress enacted the TREAD Act, in which it commanded the agency to complete by November 1, 2001, a rulemaking requiring tire pressure warning systems to be installed in new vehicles within two years thereafter:

Not later than 1 year after the date of enactment of this Act [November 1, 2000], the Secretary of Transportation shall complete a rulemaking for a regulation to require a warning system in new motor vehicles to indicate to the operator when a tire is significantly under inflated. Such a

²A TPMS could also combine an indirect TPMS with a direct TPMS on two wheels, although no such hybrid system is currently in production. NHTSA expects that such a system would be able to detect when the pressure in one to four tires fell to 25 percent below the placard pressure but would not be able to display the pressure in each of the four tires individually. 67 Fed. Reg. 38716; *see* A-131 (comments of TPMS supplier TRW). NHTSA estimates that the installation cost per vehicle would be \$39.90, for vehicles already equipped with anti-lock brakes, and that the maintenance cost of replacing the direct sensors in the two wheels would be \$20.45 per vehicle, every 90,000 to 100,000 miles. 67 Fed. Reg. 38740, 38741.

requirement shall become effective not later than 2 years after the date of the completion of such rulemaking.

Section 13, Public Law 106-414, 114 Stat. 1806 (49 U.S.C. § 30123 note). Accordingly, on July 25, 2001, NHTSA issued a proposed rule addressing TPMSs. NHTSA proposed a TPMS requirement for new passenger cars, light trucks, and multipurpose passenger vehicles (collectively, “light vehicles”). A-85 (66 Fed. Reg. 38983). The notice sought comment on two versions of a TPMS safety standard. Although the proposed standards (like the final standards later issued) were drafted with the currently available systems in mind, they were not stated in terms of direct or indirect systems, but in terms of performance capabilities.

The first proposed alternative would have required a system that would warn the driver when the tire pressure in one or more tires, up to all four, fell to 20 percent or more below the placard pressure (the vehicle manufacturer’s recommended cold inflation pressure for the tires) or a minimum level of pressure to be specified in the standard, whichever pressure were higher. NHTSA assumed that only a direct system could satisfy such a performance standard. *Id.*

The second alternative would have required a system that would warn the driver when the tire pressure in one or more tires, up to three tires, had fallen to 25 percent or more below the vehicle manufacturer’s recommended cold inflation pressure for the tires or a minimum level of pressure to be specified by NHTSA, whichever pressure

were higher. NHTSA assumed that either a direct or an indirect system could satisfy this alternative. *Id.*

NHTSA estimated that the first alternative would prevent 10,635 injuries and 79 deaths at an average cost of \$66.33 per vehicle. (The final rule revised these figures to 10,271 to 10,611 injuries and 141 to 145 deaths. 67 Fed. Reg. 38717.) Factoring in fuel and tread life savings, the average net cost of this alternative would drop to \$23.08 per vehicle. As to the second alternative, NHTSA estimated that it would prevent 6,585 injuries and 49 deaths at an average cost of \$30.54 per vehicle. The average net cost was an estimated \$8.63 per vehicle. A-98, A-99 (66 Fed. Reg. 38996, 38997).

The proposed rule recognized that direct systems could meet the more stringent performance standard and that indirect systems could not. The agency compared the capabilities of the two systems and found that as to every aspect of performance the direct systems were superior: They could detect pressure loss in any combination of tires; indirect systems could not. They could detect 20 percent underinflation; indirect systems could not. They could detect underinflation while the vehicle was stationary; indirect systems could not. They could identify which tire was underinflated; indirect systems could not. They were not susceptible to giving false indications of underinflation; indirect systems were. The only aspects in which NHTSA found that direct systems did not excel were not related to performance: Direct systems cost more

than indirect systems to install in vehicles that already have anti-lock brakes, and direct systems currently require a battery. *Id.* at 38988-89.

B. NHTSA'S DRAFT FINAL RULE AND OMB'S RETURN LETTER

After the comment period ended, NHTSA decided to issue a rule that provided a four-year phase-in schedule, during which manufacturers of light vehicles could comply by installing either of two options: (1) a system that alerted the driver when any tire or any combination of tires fell below 25 percent of the recommended cold inflation pressure or (2) a system that alerted the driver when any one tire (but not necessarily when more than one tire) fell 30 percent or more below the recommended pressure. The agency's decision to include the latter option reflected the auto industry's push for a rule that permitted use of indirect systems. *See, e.g.*, 67 Fed. Reg. 38725, 38726. Under NHTSA's draft final rule, however, after October 31, 2006, when the phase-in period ended, the provisions of the first option would have become mandatory for all new vehicles. *Id.* at 38705. The agency believed that establishing a four-tire, 25 percent standard for the long term was preferable "because it would require TPMSs that warn drivers about all combinations of significantly under-inflated tires and provide more timely and effective warnings." *Id.* at 38718. In other words, NHTSA's draft final rule recognized that "a four-tire, 25 percent requirement would better fulfill the purposes of the TPMS mandate in the TREAD Act, while encouraging further improvements in TPMS technology." *Id.*

In accordance with Executive Order 12866, which provides for cost-benefit review by the Office of Budget and Management (“OMB”) of significant regulatory actions, NHTSA submitted its draft final rule to OMB. OMB subsequently returned the draft and directed the agency to reconsider its determination. *Id.* at 38711-12. OMB did not disagree with NHTSA’s determination that direct systems work more effectively than indirect systems to detect underinflated tires. *Id.* at 38718; A-280 (OMB letter). However, OMB pushed NHTSA to maintain the one-tire, 30 percent standard for the long term, thereby allowing indirect TPMSs to be used indefinitely. OMB’s theory was that allowing long term use of indirect TPMSs would encourage manufacturers to install anti-lock braking systems, which OMB said provided additional safety benefits as compared to conventional braking systems. 67 Fed. Reg. 38718; A-280. Further signaling its resistance to Congress’s determination of a need for a TPMS requirement, OMB asked NHTSA to provide additional explanation of the technical foundation for the agency’s safety benefits estimates and to subject the estimates to sensitivity analysis. 67 Fed. Reg. 38712; A-280.³

NHTSA rejected OMB’s request that the agency use the TPMS rule to encourage use of anti-lock brakes. NHTSA first pointed out that the TREAD Act’s mandate did not address anti-lock brakes. Focusing on what Congress had directed the

³Sensitivity analysis is used to determine the degree to which a conclusion is affected by potential changes in the variables on which the conclusion rests.

agency to do, NHTSA explained the superior performance of direct systems by citing its February 2001 survey, *see supra* p. 6, which found that 20 percent of vehicles have one or more tires that are at least 30 percent underinflated and that direct TPMSs would have detected significant underinflation in *every* instance; indirect TPMSs would have detected significant underinflation in only 51 percent of the cases. 67 Fed. Reg. 38718. In addition, NHTSA noted the absence of evidence that allowing the one-tire, 30 percent option for an indefinite time would increase installation of anti-lock brakes and, at least as important, the absence of evidence that anti-lock brakes reduce fatalities or otherwise increase the safety of light vehicles. *Id.* at 38719-21.

In response to OMB's request for a better explanation of NHTSA's estimates of safety benefits and for a sensitivity analysis—and without addressing the TREAD Act's mandate that the requirement that TPMSs be installed in new vehicles become effective no later than November 1, 2003—NHTSA decided to postpone its final decision on TPMS requirements for four years. NHTSA reasoned that sensitivity analysis is relevant primarily to the decision as to the best TPMS for the long term and that, by putting off its decision regarding the long-term standard, it would have time to conduct further analyses. The agency stated that by March 2004 it would complete a study examining whether the inflation levels of tires on vehicles with TPMSs, and in particular with indirect TPMSs, were closer to the manufacturers' recommended levels than the inflation levels of tires on vehicles without TPMSs. (NHTSA did not address

how it would gather enough data to conduct a statistically significant study of TPMS performance, when the first year of the phase-in period does not begin until five months before the study is due to be completed.) NHTSA further stated that it did not expect to obtain new data on the effects of underinflation on crashes, but that it might perform a sensitivity analysis on the data it already had if the issue became important. *Id.* at 38721; A-342 (NHTSA Memo).

C. NHTSA'S FINAL RULE

NHTSA issued its final rule on May 30, 2002. The commentary accompanying the rule states that NHTSA initially analyzed three potential performance standards—a four-tire, 20 percent alternative (TPMS able to detect underinflation of 20 percent or more in one tire or any combination of tires up to all four), a three-tire, 25 percent alternative (TPMS able to detect underinflation of 25 percent or more in one tire or any combination of tires up to three tires), and a four-tire, 25 percent alternative. *Id.* at 38716-17. Its final rule adopts two alternative performance standards: the four-tire, 25 percent alternative and an alternative not initially considered by the agency—a one-tire, 30 percent alternative (TPMS able to detect underinflation of 30 percent or more in any one tire, but not necessarily able to detect underinflation when it exists in more than one tire). Under either standard, the TPMS must be able to detect underinflation either at the percentage stated or below a minimum level of pressure specified by the agency, whichever is higher. *Id.* at 38722-23.

NHTSA chose the four-tire, 25 percent standard rather than the four-tire, 20 percent standard because, although the latter would prevent more fatalities and more injuries, *id.* at 38717, and although direct TPMSs can meet a 20 percent standard, A-131 (comments of TPMS supplier TRW), NHTSA thought that indirect TPMSs could be improved and hybrid TPMSs could be developed to meet a 25 percent standard but not a 20 percent standard. 67 Fed. Reg. 38717-18 (agency created four-tire, 25 percent option “by adjusting the definition of ‘significantly under-inflated’ . . . to 25 percent (instead of 20) so that improved indirect TPMSs and hybrid TPMSs could be used to comply with the TPMS standard”). NHTSA chose the one-tire, 30 percent option because current indirect tire pressure monitoring systems could not meet any of the more stringent levels that NHTSA had considered. *Id.* at 38725 (“[C]urrent indirect TPMSs are not capable of meeting a four-tire, 25 percent requirement. Accordingly, the agency is providing two compliance options . . .”). NHTSA thus made clear that it weakened both alternative performance standards to accommodate the capability of indirect TPMS technology, notwithstanding the availability of direct TPMS technology that could meet a stronger standard.

NHTSA estimates that if all light vehicles met the four-tire, 25 percent performance standard, TPMSs would prevent 124 deaths and prevent or reduce the severity of 8,722 injuries each year. The net cost per equivalent life saved would be about \$4.3 million. If all light vehicles met the one-tire, 30 percent standard, TPMSs

would prevent only an estimated 79 deaths and prevent or reduce the severity of only 5,176 injuries. (In arriving at this estimate, NHTSA assumes that 67 percent of the vehicles would have anti-lock brakes and use indirect systems and that the remaining 33 percent would use direct systems.) The net cost per equivalent life saved would be about \$5.8 million. *Id.* at 38740, 38741.⁴

The final rule sets a lengthy schedule for phasing in the TPMS requirement: Only 10 percent of each manufacturer's new light vehicles must comply with one of the two TPMS standards in the year ending October 31, 2004; 35 percent must comply in the year ending October 31, 2005; and 65 percent must comply in the year ending October 31, 2006. *Id.* at 38706.

In March 2005, NHTSA intends to issue a performance standard for the long term, to be based on the information in the docket, including any new information submitted in the interim and the results of the study to be completed by March 1, 2004. *Id.* at 38722; *see supra* pp. 14-15. Beginning November 1, 2006, NHTSA will require all new light vehicles to comply with the long-term performance standard. *Id.* at 38706.

⁴Petitioners' understanding is that "equivalent life saved" takes into account both the number of fatalities prevented and the number of injuries prevented.

D. REQUESTS FOR RECONSIDERATION

NHTSA received several requests for reconsideration of various aspects of the rule. For purposes of this petition for review, the details of the requests are not important, for they challenge aspects of the rule not at issue here. It is noteworthy, however, that the request for reconsideration of the Rubber Manufacturers Association, the national trade association for the tire and rubber products manufacturing industry, expresses significant concern that NHTSA's choice of performance standards "does not adequately protect motor vehicle operators from the risks of driving on significantly under-inflated tires." A-333.

E. PARTIES TO THIS PETITION FOR REVIEW

Petitioners are Public Citizen, Inc., New York Public Interest Research Group ("NYPIRG"), and the Center for Auto Safety. All three are membership organizations, with members who will buy or lease new passenger vehicles between October 2003 and November 2006. These members will be impeded in their ability to purchase a vehicle with an effective TPMS system and subjected to an increased risk of injury or death from auto accidents. *See* Claybrook Decl.; Ditlow Decl.; Horner Decl.; Kimmel Decl.; Lurie Decl.; Rajani Decl.⁵

⁵The declarations cited above are included in Petitioners' Appendix of Declarations Supporting Standing, filed on September 26, 2002.

Public Citizen, a nationwide consumer advocacy organization, is a nonpartisan, not-for-profit group founded in 1971, with a current membership of approximately 125,000. Public Citizen advocates before Congress, administrative agencies, and the courts for strong and effective health and safety regulation, and has a long history of advocacy on matters related to auto safety. Public Citizen lobbied to pass the TREAD Act and submitted comments supporting the proposed four-tire, 20 percent standard in response to NHTSA's notice of proposed rulemaking regarding tire pressure monitoring systems. *See Claybrook Decl.*

NYPIRG, New York State's largest consumer, environmental and government reform organization, is a nonpartisan, not-for-profit group established to effect policy reforms while training students and other New Yorkers to be advocates. Since 1973, NYPIRG has played a key role in fighting for more than 120 public interest laws and executive orders. In the area of auto regulation, NYPIRG has advocated for strong "lemon laws" and stringent clean air protections. *See Horner Decl.*

The Center for Auto Safety is a non-profit consumer advocacy organization that, among other things, works for strong federal safety standards to protect drivers and passengers. The Center was founded in 1970 to provide consumers a voice for auto safety and quality in Washington and to help "lemon" owners fight back across the country. The Center advocates for auto safety before the Department of Transportation and in the courts. *See Ditlow Decl.*

Respondent Norman Mineta is the Secretary of Transportation, charged by Congress with implementing section 13 of the TREAD Act.

Respondent-Intervenor Alliance of Automobile Manufacturers is a trade organization formed in 1999. The Alliance advocates for the economic interests of automobile manufacturers before federal regulatory agencies and in other forums. Alliance members include BMW Group, DaimlerChrysler Corporation, Fiat Auto S.p.A., Ford Motor Company, General Motors Corporation, Isuzu Motors America, Inc., Mazda North American Operations, Mitsubishi Motor Sales of America, Inc., Nissan North America, Inc., Porsche Cars North America, Inc., Toyota Motor North America, Inc., and Volkswagen of America, Inc. The Alliance filed comments during the TPMS rulemaking. *See* Memo in Support of Alliance's Motion for Leave to Intervene, dated July 24, 2002.

SUMMARY OF ARGUMENT

Having identified a performance standard that would be effective, achievable, and affordable, and that could be implemented right away, NHTSA decided to issue a rule that permitted manufacturers to meet a less effective standard, more costly both in terms of the number of fatalities and injuries and the cost per equivalent life saved. At the same time that it issued the rule, the agency reiterated that one of the available technologies—a direct TPMS—could meet a higher standard and would better fulfill the purpose of the statute. The decision to issue a rule expressly tailored to enable use

of the less effective technology—an indirect TPMS—was arbitrary, capricious, an abuse of discretion, and contrary to law.

First, the one-tire, 30 percent alternative standard adopted to enable use of indirect TPMSs violates the TREAD Act. The Act instructs the agency to promulgate a rule that requires new vehicles to have TPMSs that alert drivers when “a tire” is significantly underinflated. Under NHTSA’s rule, however, manufacturers can install indirect TPMSs, which cannot detect underinflation in approximately half the instances in which a tire is significantly underinflated. More specifically, when a vehicle has not one tire underinflated, but two or four, the driver will receive no warning at all. And when a tire is significantly underinflated as compared to the recommended pressure but not as compared to the other tires on the vehicle, the driver will receive no warning. Moreover, although NHTSA agrees that 25 percent underinflation is “significant,” it is allowing TPMSs that do not warn drivers until a tire is 30 percent underinflated. As NHTSA expressly recognized, indirect TPMSs will “not . . . detect many situations involving significant under-inflation in the real world.” 67 Fed. Reg. 38727. Thus, the one-tire, 30 percent alternative performance standard is contrary to the express mandate of the TREAD Act.

Likewise, NHTSA’s phase-in schedule cannot be reconciled with the language of the statute, which requires urgent action that contrasts starkly with the leisurely pace adopted by NHTSA. Congress directed that the agency issue a final TPMS rule within

one year and that the requirement that a TPMS be installed in new vehicles be effective “not later than two years” later—that is, by November 1, 2003. NHTSA’s slow phase-in period, however, will not require TPMSs in more than one third of new vehicles as late as October 31, 2006. Even then, few if any new vehicles may have a TPMS that can actually detect when “a tire is significantly under inflated.”

Second, the rule is arbitrary and capricious insofar as it includes the one-tire, 30 percent alternative when the four-tire, 25 percent alternative is achievable, is affordable, promotes greater safety, and better satisfies Congress’s mandate. Although NHTSA’s rule is stated in terms of performance capabilities, not in terms of the type of technology to be used, it was expressly tailored to allow use of either of the two currently available TPMSs. Yet NHTSA’s own findings make clear that the performance capabilities of direct systems are superior to those of indirect systems in every way relevant.

This flaw in the rule was made even worse by NHTSA’s phase-in schedule. The rule establishes for each year an increasing percentage of new vehicles on which manufacturers must install TPMSs, but does not specify that any of the vehicles must meet the higher performance standard. Based on NHTSA’s assumption that manufacturers will use indirect systems on vehicles with anti-lock brakes, the fact that approximately 67 percent of new vehicles have anti-lock brakes, and the fact that the rule requires TPMSs in only 65 percent of new vehicles during the final year of the

phase-in period, the rule allows manufacturers to comply using only indirect systems for the entire period it covers. In light of NHTSA's finding that direct systems would better fulfill the statutory mandate and better serve the public, this result cannot be sustained.

Third, although NHTSA initially proposed a four-tire, 20 percent performance standard, in the final rule NHTSA adopted a weaker 25 percent standard. Again, the decision to do so was based entirely on a desire to accommodate the limitations of indirect tire pressure monitoring systems. Given that NHTSA's record demonstrates that 20 percent underinflation is significant, and given that current direct technology can detect 20 percent underinflation, the final rule is arbitrary and capricious insofar as it does not require TPMSs to indicate to drivers when a tire is underinflated by 20 percent.

STANDARD OF REVIEW

The Court reviews the final agency action challenged in this petition to determine whether the agency's rule is "arbitrary and capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). *See Motor Vehicle Manufacturers Ass'n v. State Farm Mutual Automobile Insurance Co.*, 463 U.S. 29, 34, 41 (1983).

ARGUMENT

I. THE FINAL RULE IS CONTRARY TO LAW BECAUSE IT VIOLATES THE PLAIN LANGUAGE OF THE TREAD ACT.

“[T]he starting point for interpreting a statute is the language of the statute itself. Absent a clearly expressed legislative intention to the contrary, that language must ordinarily be regarded as conclusive.” *Lehman v. Burnley*, 866 F.2d 33, 36 (2d Cir. 1989) (citing *Consumer Product Safety Commission v. GTE Sylvania, Inc.*, 447 U.S. 102, 108 (1980)). The language of the TREAD Act instructs NHTSA to issue “a regulation to require a warning system in new motor vehicles to indicate to the operator when a tire is significantly under inflated.” The language further mandates that the “requirement shall become effective not later than 2 years after the date of the completion of such rulemaking.” SPA-1.

In three respects, NHTSA final rule violates the plain language of the TREAD Act: It allows a TPMS that cannot detect when “a tire” is underinflated; it allows a TPMS that cannot detect “significant underinflation”; and it does not require installation of TPMSs in new vehicles within the two-year time period provided for by Congress.

A. “A tire”

As defined by NHTSA, the one-tire, 30 percent compliance option is satisfied by a TPMS that detects when any *one* tire is underinflated by 30 percent or more,

whether or not the TPMS can detect underinflation when *more* than one tire is underinflated. 67 Fed. Reg. 38718. As NHTSA recognizes and, indeed, expressly intends, manufacturers can comply with this standard using indirect TPMSs, *id.* at 38725, which will not warn the driver (1) when all four tires are significantly underinflated, (2) when two tires on the same side or the same axle are significantly underinflated, and (3) when one tire is significantly underinflated but is not inflated 30 percent less than the other tires. *Id.* at 38718. Thus, under NHTSA’s rule, manufacturers can comply using TPMSs that—according to NHTSA’s data—do not notify drivers in half the instances in which “a tire is significantly under inflated.” *Id.* at 38718, 38728.

The final rule is contrary to the express mandate of Congress, which requires a warning system that would alert the driver whenever “a tire” is significantly underinflated. To permit manufacturers to use a TPMS that does not recognize underinflation occurring in two or four tires, NHTSA would have to make the absurd argument that Congress did not intend to warn drivers when more than one tire was underinflated, only when one tire was. NHTSA cannot seriously take the position that a car with *two* underinflated tires does not have *a* tire that is underinflated—that position would be not simply arbitrary, but totally nonsensical. *See* 1 U.S.C. § 1 (“words importing the singular include and apply to several persons, parties, or things”); *see also Toy Manufacturers of America v. CPSC*, 630 F.2d 70, 74 (2d Cir.

1980) (statute permitting agency to find “a toy” hazardous by regulation gives agency authority to promulgate regulations covering more than one product at a time).

Similarly, drivers of vehicles in which manufacturers have used indirect TPMSs to satisfy the one-tire, 30 percent standard—as NHTSA expects manufacturers to do—will get no notice in instances where one tire is inflated 30 percent below placard pressure but not 30 percent below the level of pressure in the other tires. 67 Fed. Reg. 38718. Yet the language of the statute forecloses the notion that a TPMS need not notify a driver when one tire is significantly underinflated in instances where other tires are also underinflated. Again, by permitting a system that cannot detect underinflation in common situations in which “a tire” is significantly underinflated, NHTSA’s performance standard is contrary to the plain language of the TREAD Act.

Moreover, a performance standard that is satisfied by a TPMS that alerts a driver when one, but not necessarily more than one, tire is underinflated has significant safety drawbacks. NHTSA estimates that all four tires are significantly underinflated on about 7 million cars and light trucks at any time, and that two tires are significantly underinflated in approximately four times as many vehicles. *Id.* at 38727; *see also id.* at 38712 (recent Consumers Union survey showed that all four tires on vehicle will likely lose pressure at similar rate); *id.* at 38726 (Rubber Manufacturers Association, on behalf of tire manufacturers, commented that “it is very likely that all four tires will lose air pressure at a similar rate and become significantly underinflated within a in

six-month period”). As a result, and contrary to the statute’s purpose, indirect TPMSs that meet the one-tire, 30 percent performance standard will fail to warn millions of drivers that their tires are significantly underinflated. In fact, on many of the vehicles with the Firestone tires that contributed to serious accidents—and that prompted the TREAD Act—all four tires were underinflated. *See* NHTSA, Preliminary Economic Assessment, FMVSS No. 139, *supra* p. 5, at 1-2 (low placard pressure recommended on Ford Explorer’s Firestone tires contributed to tread separation and resulting accidents).

A February 2001 NHTSA survey demonstrated the extent of this shortcoming: In the survey, direct TPMSs would have provided warnings in every instance in which NHTSA found significant underinflation; indirect TPMSs would have provided warnings in only 49 percent of those instances, in large part due to their inability to detect underinflation in all four tires. *Id.* at 38718. This outcome is made even more troublesome by NHTSA’s prediction that 65 percent of drivers will be less concerned about routinely checking their tire pressure if their vehicle is equipped with a TPMS because they will assume that the TPMS is doing its job. *Id.* For drivers of vehicles with indirect TPMSs, however, that assumption will be mistaken. As a result, for drivers with indirect TPMSs, NHTSA’s rule may result in a decrease in safety—a result obviously contrary to the statute’s purpose.

B. “Significantly under inflated”

Turning on its head the “normal rule of statutory construction that identical words used in different parts of the same act are intended to have the same meaning,” *Commissioner of Internal Revenue v. Lundy*, 516 U.S. 235, 250 (1996) (citation omitted), in the TPMS rule NHTSA has taken a statutory term used once and construed it to mean two different things. In the first alternative performance standard, NHTSA requires a TPMS that alerts drivers when the pressure in one or more tires falls 25 percent or more below the placard pressure. In other words, for purposes of this standard, “significantly under inflated” means 25 percent below placard pressure. Under the second alternative, the TPMS need not alert the driver until the pressure in one tire falls 30 percent below the placard pressure. In other words, that alternative considers “significantly under inflated” to mean 30 percent below placard pressure.

If a tire is “significantly under inflated” when the pressure falls 25 percent, however, then that tire is significantly underinflated no matter the type of TPMS used to alert the driver. A tire cannot be “significantly under inflated” at 25 percent if it has a direct TPMS but *not* “significantly under inflated” even at 29 percent if it has an indirect TPMS. That is, if 25 percent represents significant underinflation, then any performance standard that meets the requirements of the TREAD Act must alert the driver when tire pressure falls to that level. *See also* 67 Fed. Reg. 38709 (Rubber

Manufacturers Association commented that inflation 20-25 percent below placard pressure may be insufficient to carry load of vehicle).

Because NHTSA's final rule is based on the conclusion that 25 percent underinflation is significant, the rule violates the TREAD Act insofar as it establishes an alternative standard that allows TPMSs that will not alert drivers when tire pressure falls to that level.⁶

C. "Such a requirement shall become effective not later than 2 years after the date of the completion of such rulemaking."

The TREAD Act mandates that "[n]ot later than 1 year after the date of enactment of this Act [November 1, 2000], the Secretary of Transportation shall complete a rulemaking for a regulation to require a warning system in new motor vehicles to indicate to the operator when a tire is significantly under inflated." Reflecting the sense of urgency that Congress attached to the matter, the statute further provides that the "[TPMS] requirement shall become effective not later than 2 years after the date of the completion of [the] rulemaking." SPA-1. Thus, under the statute, the TPMS requirement that new motor vehicles be equipped with TPMSs was to

⁶NHTSA's determination that 25 percent underinflation is significant demonstrates the impropriety of the 30 percent standard. On the other hand, NHTSA's discussion of 20 percent underinflation demonstrates that its decision to weaken the four-tire performance standard from the proposed 20 percent requirement to the final requirement that TPMSs detect 25 percent underinflation was arbitrary and capricious. *See infra* at III.

become effective no later than November 1, 2003. *See Hewitt v. Helms*, 459 U.S. 460, 471 (1983) (“shall” is “language of unmistakably mandatory character”).

Notwithstanding the timeline established by Congress, NHTSA’s rule requires a TPMS in only 10 percent of new vehicles produced in the year beginning November 2003. As late as October 31, 2006—three years after Congress directed the requirement to become effective—the rule will require only 65 percent of new vehicles to have a TPMS and will not require *any* of those vehicles to have a TPMS that can detect underinflation of less than 30 percent in one or more tires. In fact, accepting NHTSA’s assumption that manufacturers will install indirect systems on vehicles with anti-lock brakes, *see* 67 Fed. Reg. 38740, and given that 67 percent of new light vehicles have anti-lock brakes, *id.*, it is likely that four years from now few if any new vehicles will have a TPMS that can alert the driver whenever “a tire” is “significantly under inflated.”

In its Final Economic Assessment, NHTSA asserted that the statutory mandate that the “requirement shall become effective” means “that the final rule must be effective” on November 1, 2003. A-291. However, the TREAD Act does not state that the “final rule” must become effective within two years of the date on which the rule is issued; the Act states that the “*requirement* shall become effective not later than two years after the date of completion of [the] rulemaking” (emphasis added). The prior sentence in the Act refers to “a regulation to require a warning system in new motor

vehicles,” and thus the effective date of the “requirement” plainly refers to the date on which TPMSs become required in all new motor vehicles. Indeed, in the final rule, NHTSA recognizes the distinction between the “rule” and the “requirement”: NHTSA states that the “final rule is effective August 5, 2002,” and that “vehicles will be required to comply with the requirements of the standard according to a phase-in beginning on November 1, 2003.” 67 Fed. Reg. 38704. Thus, the agency has itself recognized that the effective date of the “rule” and the effective date of the “requirement” are two different things. It has nonetheless ignored its obligation to impose the requirement on all new vehicles by November 1, 2003, in contravention of the Act’s express instruction. *See also Natural Resources Defense Council v. Reilly*, 983 F.2d 259, 261, 267, 268 (D.C. Cir. 1993) (agency lacked authority not to issue standard where statute directed agency to promulgate standards to require certain equipment in new light vehicles over specific phase-in period and imposition of standard over a given and detailed time frame was central purpose of statute).⁷

Put simply, the statute directs NHTSA to impose a TPMS requirement on new motor vehicles, not on 10 percent of new vehicles, or 35 percent, or even 65 percent.

⁷*Pacific Legal Foundation v. Department of Transportation*, 593 F.2d 1338, 1348 (D.C. Cir. 1979), which upheld the agency’s decision to phase in implementation of a safety standard, is inapposite here. In that case, the relevant statutory provision required that the standard be implemented within one year of issuance, unless the Secretary could demonstrate “good cause.” Section 13 of the TREAD Act contains no such exception.

And the statute directs NHTSA to impose the requirement by November 1, 2003, not as of November 1, 2006, or sometime thereafter. The phase-in provided for in the rule violates the TREAD Act.

II. NHTSA’S RULE IS ARBITRARY AND CAPRICIOUS BECAUSE IT IS TAILORED TO ACCOMMODATE AN INEFFECTIVE TIRE PRESSURE MONITORING SYSTEM.

Administrative rulemaking is arbitrary and capricious when the agency relies on factors Congress did not want considered, utterly fails to analyze an important aspect of a problem, offers an explanation contrary to the evidence before it, or offers an explanation so implausible that it cannot be ascribed to differing views or agency expertise. *Natural Resources Defense Council v. Muszynski*, 268 F.3d 91, 97 (2d Cir. 2001). Insofar as it adopts the one-tire, 30 percent standard, NHTSA’s TPMS rule fails on all counts; for the four-tire, 25 percent alternative is feasible and better fulfills Congress’s purpose, as the agency reiterates throughout its final rule.

A. The Agency’s Own Comparison Of The Two Available Monitoring Systems Demonstrates That Adopting A Rule Expressly Calculated To Allow Manufacturers To Install The Inferior System Was Arbitrary And Capricious.

Again, although the rule is stated in terms of performance standards, those standards in fact represent the capabilities of the two types of TPMSs currently available: direct systems and indirect systems. NHTSA’s findings about the two systems reveal the following:

C Direct TPMSs can detect a lower level of underinflation than can indirect systems. A-90 (66 Fed. Reg. 38988); 67 Fed. Reg. 38705.

C Direct TPMSs can detect underinflation in any combination of tires, from one tire to all four, whereas indirect systems cannot detect underinflation when all four tires are underinflated or when two tires on the same side or same axle are underinflated—as happens in millions of vehicles every day. *Id.* at 38727.

C Direct TPMSs warn when any tire or tires are underinflated by a certain percentage below the recommended pressure; indirect TPMSs warn only when one or three tires are underinflated a certain percentage below the pressure level in the other tires. “As a result, if all four tires are significantly under-inflated, and the difference in the tire pressures is not 30 percent or greater, current indirect TPMSs will not provide a warning.” *Id.* at 38718.

C Direct TPMSs can detect significant underinflation and warn the driver when the car is either stationary or moving, and they can do so in less than one minute. Indirect TPMSs function only when the vehicle is moving, and they can take from less than one minute to over eight minutes to detect significant underinflation. *Id.* at 38728.

C Direct TPMSs can indicate to the driver precisely which tires are underinflated; an indirect TPMS can only indicate that it has detected underinflation and cannot inform the driver which or how many tires are underinflated. *Id.* at 38716.

C Direct TPMSs can operate properly on bumpy roads and at high speeds (above 70 miles per hour); indirect TPMSs cannot. A-90 (66 Fed. Reg. 38988); 67 Fed. Reg. 38729.

C Direct systems do not need recalibration. Indirect systems need recalibration when the vehicle is first driven, when a tire is changed, and when the tires are rotated. They will also recalibrate whenever the reset button is hit. NHTSA is allowing recalibration to take up to 20 minutes. Indirect TPMSs are inoperative when recalibrating but do not alert the driver that they are in recalibration mode, and they calibrate to the level of the tires' current inflation. *Id.* at 38730. Consequently, if any tire is underinflated when the system is recalibrating—for example, because the driver has accidentally hit the TPMS reset button—the TPMS will read that level of underinflation as normal and not warn the driver until one tire falls 30 percent below that level. *Id.* at 38729.

In the final rule, NHTSA identified only one drawback to direct TPMSs, which it did not suggest was significant: The battery and sensors in current direct TPMSs must be replaced every five to ten years, at an estimated cost of \$40.91 per vehicle every 90,000 to 100,000 miles—hardly a substantial matter. *See id.* at 38741. *But see id.* (TPMS manufacturer has developed direct TPMS sensor that does not use battery).⁸

⁸The proposed rule asked for comment on whether “the wheel components of
(continued...) ”

NHTSA acted arbitrarily in crafting a rule tailored to allow use of current indirect TPMSs because indirect TPMSs simply will not cure the problem that Congress sought to address. This conclusion is borne out by the facts regarding the incidence of tire underinflation: NHTSA found that 38 percent of passenger cars and light trucks had at least one tire that was at least 20 percent below the placard pressure; 27 percent had at least one tire that was at least 25 percent below the placard pressure; 20 percent had at least one tire that was at least 30 percent below the placard pressure. A-87 (66 Fed. Reg. 38985); 67 Fed. Reg. 38718. Whereas current direct systems can warn of underinflation at all three of these levels, current indirect systems cannot. In fact, in NHTSA's survey, indirect TPMSs would have provided warnings in only 49 percent of the instances in which a tire was 30 percent or more underinflated. *Id.* The indirect systems would not have detected the underinflation for a variety of reasons:

⁸(...continued)

direct TPMSs are less robust and more likely to sustain damage than the wheel components of indirect TPMSs," although NHTSA had no "information indicating that direct TPMSs have sustained damage during driving or tire maintenance." A-90 (66 Fed. Reg. 38988). The comments received suggested that wheel components of direct TPMSs were not likely to sustain damage, 67 Fed. Reg. 38711, and NHTSA's explanation in the final rule did not conclude that direct TPMSs were more likely to suffer damage than indirect TPMSs.

In addition, NHTSA mentioned comments from respondent-intervenor Alliance of Automobile Manufacturers, which pressed for a rule allowing indirect systems, stating that radio frequency interference may disrupt the transmission of direct TPMS sensor signals from the wheel sensors to the receiver. *Id.* at 38729. NHTSA expressed no concern over this possibility.

In some vehicles, the pressure in one tire was more than 30 percent below the placard pressure but not more than 30 percent below the pressure in the other tires; in others, the pressure was more than 30 percent below the placard pressure in two tires on the same axle or the same side of the vehicle. *Id.* Not surprisingly, NHTSA predicts that direct TPMSs will save more lives and prevent more serious injuries than indirect TPMSs. *Id.* at 38740. Thus, to borrow a phrase from NHTSA, *id.* at 38727, the limitations of indirect TPMSs make a “real world” difference.

Indeed, in recognition that “indirect TPMSs have several limitations,” *id.*, NHTSA is requiring manufacturers that equip their vehicles with indirect systems to include a special notice in the owner’s manuals to explain that the TPMS will not notify the driver of significant underinflation in many instances, which “account[] for approximately half the instances in which vehicles have underinflated tires.” *Id.* at 38728. Essentially, the notice urges drivers of vehicles with indirect TPMSs not to rely on the TPMS and to self-check the tires. *Id.* In contrast, vehicles equipped with a direct TPMS need no special notice. Moreover, NHTSA is allowing carry-forward credits for vehicles manufactured during the phase-in that meet the four-tire, 25 percent standard but is not allowing credits for vehicles that meet the one-tire, 30 percent standard “for the same reason that the agency is requiring manufacturers to provide consumers with information about the performance limitations of those systems,” *id.*

at 38706—that is, because they are incapable of detecting significantly underinflated tires in half of the instances in which they occur. *Id.* at 38728.⁹

Having considered the many advantages of direct TPMSs, NHTSA concluded that direct TPMSs provide “more timely and effective warnings” than indirect TPMSs. *Id.* at 38718. Thus, NHTSA stated several times that, “[b]ased on the record now before the agency, NHTSA tentatively believes that the four-tire, 25 percent option would best meet the mandate in the TREAD Act,” *id.* at 38722, and “best serve the American public.” *Id.* at 38727; *see id.* at 38706, 38718, 38738. NHTSA’s task, of course, was to issue a rule “based on the record” before it. Given the obvious superiority of direct TPMSs in terms of performance and satisfaction of the TREAD Act, NHTSA’s decision to issue two alternative performance standards for the express purpose of allowing vehicle manufacturers to comply using the less effective indirect system was arbitrary and capricious.

B. The Phase-In Schedule Is Arbitrary And Capricious Because Manufacturers Can Fully Comply Using Indirect Systems.

Even if the TREAD Act allowed a four-year phase-in period, *but see supra* at I.C., NHTSA’s schedule for phasing in compliance with the TPMS rule would be arbitrary and capricious because the rule permits manufacturers to comply using

⁹“Carry-forward credit” is credit that NHTSA allows a manufacturer to apply toward the next year’s compliance requirement when the manufacturer exceeds the percentage required by the phase-in for the current year.

exclusively indirect systems. Each manufacturer must install TPMSs in ten percent of the light vehicles it produces during the year ending October 31, 2003, in 35 percent of the light vehicles it produces in the year ending October 31, 2005, and in 65 percent of the light vehicles it produces in the year ending October 31, 2006. *Id.* at 38706. In the 2000 model year, about 67 percent of all new light vehicles were equipped with ABS. *Id.* at 38740. Thus, throughout the entire phase-in period, auto manufacturers whose production of vehicles with anti-lock brakes approximates the industry average will be able to comply with the TPMS rule using indirect systems only. This scenario is in fact likely, as NHTSA assumes that manufacturers will use indirect systems on vehicles with anti-lock brakes and direct systems only on vehicles without anti-lock brakes. *Id.*; *see also id.* at 38725 (for vehicles with anti-lock brakes, installation of indirect TPMS cheapest way of complying with rule).

Thus, NHTSA's final rule essentially establishes only a one-tire, 30 percent performance standard for the next four years. And given the deficiencies of the indirect system, three years after the statutory deadline only 2 percent of new vehicles may have a TPMS that satisfies the statutory requirement of a warning system that will alert the driver when "a tire is significantly under inflated." *See American Fed'n of Labor v. OSHA*, 965 F.2d 962, 986 (11th Cir. 1992) (where existing technology can satisfy standard, four-year phase-in period "difficult to understand").

NHTSA states that, by March 2005, it will establish a performance standard for the long term, to become effective as of November 1, 2006, and that its current plan is to require all TPMSs to meet a four-tire, 25 percent standard. However, based on NHTSA's assumption that auto manufacturers will opt to use indirect systems for all cars with anti-lock brakes, the industry is unlikely to prepare its production to switch to direct systems at the end of the phase-in period, even if NHTSA issues a four-tire, 25 percent rule for the long term. Accordingly, NHTSA will very likely be pressured to create a new phase-in period to facilitate the switch from indirect to direct systems. Drivers will therefore have to wait more than four years to get the "more timely and effective warnings," 67 Fed. Reg. 38718, that direct systems can provide today. *Cf. Grand Canyon Air Tour Coalition v. FAA*, 154 F.3d 455, 477 (D.C. Cir.1998) ("it would be arbitrary and capricious for an agency simply to thumb its nose at Congress and say—without any explanation—that it simply does not intend to achieve a congressional goal on any timetable at all.").

The phase-in schedule thus exacerbates the arbitrariness of the final rule. The lengthy delay in assuring that drivers receive timely and effective warnings of low tire pressure is irrational in light of the current availability of a simple, inexpensive safety device—a direct TPMS.

C. The Agency Has Failed To Articulate A Rational Connection Between The Facts It Found And The Choice It Made.

As the Supreme Court has “frequently reiterated,” “an agency must cogently explain why it has exercised its discretion in a given manner.” *Motor Vehicle Manufacturers Ass’n v. State Farm Mutual Insurance Co.*, 463 U.S. 29, 48 (1984) (citations omitted). Here, the regulatory commentary setting forth NHTSA’s basis for issuing a standard that allows an admittedly inferior system consists of the following:

The combination of the two compliance options and the phase-in will allow manufacturers to continue to use current indirect TPMSs during that period and ease the implementation of the TPMS standard. The agency notes that, for vehicles already equipped with ABS, the installation of a current indirect TPMS is the least expensive way of complying with a TPMS standard. The compliance options and phase-in will also give manufacturers the flexibility needed to innovate and improve the performance of their TPMSs. This flexibility will improve the chances that ways can be found to improve the detection of under-inflation as well as reduce the costs of doing so.

67 Fed. Reg. 38706.¹⁰ This explanation hardly evidences “a rational connection between the facts found and the choice made.” *Motor Vehicle Manufacturers Ass’n*, 463 U.S. at 43 (citation omitted). Still less does it evidence fidelity to the TREAD

¹⁰See 67 Fed. Reg. 38717 (one-tire, 30 percent option created to allow use of indirect TPMSs, “thus providing additional time and flexibility for innovation and technological development”); see *id.* at 38725 (“[T]he fact remains that current indirect TPMSs are not capable of meeting a four-tire, 25 percent requirement. Accordingly, the agency is providing two compliance options in the first part of the final rule.”); *id.* at 38727 (agency wants to give manufacturers “additional time to improve indirect TPMSs or develop hybrid TPMSs”).

Act's goal of safeguarding drivers and passengers from the risks of underinflated tires. Rather, NHTSA's decision reflects a conscious choice to allow use of an ineffective system when an effective system is immediately available—just what the Supreme Court has held that NHTSA cannot permissibly do: “If, under the statute, the agency should not defer to the industry's failure to develop safer cars, which it surely should not do, a fortiori it may not revoke a safety standard which can be satisfied by current technology simply because the industry has opted for an ineffective seatbelt design.” *Id.* at 49.

The irrationality of NHTSA's explanation becomes even more apparent when it is broken down into its component parts. First, as NHTSA states, the rule will “allow manufacturers to continue to use current indirect TPMSs.” That fact, however, does not offer any justification for the rule, as it leaves begging the question of *why* NHTSA has chosen to allow continued use of a technology that it recognizes to be inferior to current direct TPMS technology. Permitting use of an inferior system, without more, is not a justification for the alternative standard; it is an indictment of it.

Second, NHTSA next states that issuing two alternative performance standards and a phase-in period will “ease implementation.” NHTSA does not explain, however, how easing implementation relates to the statute's single goal—protecting drivers and passengers from the hazards of underinflated tires. Of course, it is always “easier” not to implement a requirement than to implement one; but letting statutory goals go unmet

for the sake of “ease” is not legitimate but rather the very essence of arbitrary and capricious rulemaking. *See Natural Resources Defense Council v. EPA*, 966 F.2d 1292, 1305-06 (9th Cir. 1992) (where statute directed agency to require permits, agency acted arbitrarily and capriciously in creating exemption from permit requirement to ease burden on regulated community). Thus, its statement does nothing to explain the striking disconnect between the agency’s findings and the rule it issued.

Perhaps, although the statement would be a very inartful way of saying so, the agency was trying to suggest that the weaker one-tire, 30 percent option and the phase-in period were needed to provide adequate leadtime for manufacturers to comply fully with the stronger performance standard. That suggestion would not be justified. Allowing installation of indirect systems is counter-productive to the goal of increasing use of the more effective technology because the more that manufacturers install indirect systems the more they will be resistant to the expense of re-tooling to switch to direct systems. A leadtime argument would also fall flat because direct TPMSs capable of meeting the stronger standard are already on the market. In fact, NHTSA’s regulatory commentary does not suggest that direct TPMSs could not be provided for all new vehicles within the two-year time period mandated by the TREAD Act.¹¹

¹¹The comments of TRW, a manufacturer of direct and indirect TPMS, stated that direct TPMSs were ready for production and could meet the much faster phase-in schedule of the proposed rule (35 percent in the first year, 65 percent in the second (continued...))

Third, NHTSA “notes” that, for vehicles already equipped with anti-lock brakes, an indirect TPMS costs less to install than a direct TPMS. Again, NHTSA’s “note” does not address a concern relevant under section 13 of the TREAD Act. The language of the Act is absolute: NHTSA “shall complete a rulemaking to require a warning system in new motor vehicles to indicate to the driver when a tire is significantly under inflated.” The Act neither instructs that cost be taken into account nor gives the agency discretion to ignore its mandatory language based on costs. *See Whitman v. American Trucking Ass’ns*, 531 U.S. 457 (2001) (where statute instructed EPA to set air quality standards based on specific factors, and cost was not one of them, cost was not permissible factor to consider).¹²

¹¹(...continued)

year, 100 percent in the year beginning November 1, 2005), but that a slower phase-in period would be needed to allow time to make improvement to indirect TPMSs. 67 Fed. Reg. 38711; A-131, A-136 (TRW comments). NHTSA’s proposed rule had asked for comment on its proposed phase-in schedule but not on whether production could meet the two-year statutory implementation date for all new vehicles, and TRW’s comments did not address the latter question. Thus, the final rule cites no evidence that direct TPMSs could not be available for all new vehicles within the two years provided for by the TREAD Act.

¹²Although cost is a permissible consideration under the general standard-setting provisions of the Motor Vehicle Safety Act, *Motor Vehicle Manufacturers Ass’n*, 463 U.S. at 55, the specific requirements of section 13 of the TREAD Act do not leave room for consideration of cost. *See also Whitman*, 531 U.S. at 469-71 (fact that some provisions of statute require agency to look at cost has no bearing on whether cost considerations may be taken into account in formulating air quality standards where statutory language is absolute).

In any event, even if relevant, cost concerns would fail to provide a rational basis for the rule. To begin with, the more effective direct systems are less expensive than indirect systems to install in vehicles without anti-lock brakes, and yet NHTSA has not required that any portion of those vehicles have a TPMS throughout the phase-in period. In addition, although the cost of a direct TPMS is approximately \$45 more than the net cost of an indirect TPMS in a vehicle that already has anti-lock brakes, 67 Fed. Reg. 38740, the net cost of requiring all vehicles to meet a four-tire, 25 percent standard is less than \$10 more than the net cost of requiring all vehicles to meet the one-tire, 30 percent standard. *Id.* at 38741 (calculating net cost by adding vehicle cost and maintenance cost and subtracting fuel savings and tread life savings). More importantly, the cost difference is insignificant relative to the purchase price of a new vehicle equipped with anti-lock brakes and in light of the very substantial performance differences between direct and indirect systems. Equally important, NHTSA estimates that if all light vehicles meet the four-tire, 25 percent performance standard, the net cost per equivalent life saved will be about \$4.3 million, whereas if all vehicles meet the one-tire, 30 percent option, the net cost per equivalent life saved will be about \$5.8 million. *Id.* at 38741. Looked at in these terms, the minimal savings disappears; and the cost advantage shifts in favor of direct systems.

Fourth, the statement that the rule gives flexibility to “innovate and improve” TPMS performance also falls short of a rational explanation for allowing TPMSs that,

as NHTSA states, cannot detect underinflation in half the instances in which it occurs. Notably, NHTSA does not say that time is needed to enable development of better *direct* TPMSs; and the agency never explains why the industry should not be required to install the more effective technology while working to improve the less effective system. *Cf. Public Citizen v. Steed*, 733 F.2d 93, 102 (D.C. Cir. 1984) (“NHTSA did not explain why the existing program could not have continued while the agency sought to implement its new policy Without showing that the old policy is unreasonable, for NHTSA to say that no policy is better than the old policy solely because a new policy *might* be put into place in the indefinite future is as silly as it sounds.”). Its cursory justification reflects an unexplained assumption that companies cannot improve indirect technology unless NHTSA allows them to use it now, before it is sensitive enough, accurate enough, or effective enough to meet any of the standards NHTSA originally proposed—all of which would save more lives and prevent more injuries, and all of which are achievable for available direct systems. Moreover, NHTSA does not explain why it is important to improve indirect technology at all, given that NHTSA never suggests that indirect TPMSs could ever be as sensitive, as reliable, or as effective as direct TPMSs.¹³

¹³Toyota uses an indirect TPMS on its Sienna minivans, and the regulatory commentary describes the improvements that Toyota is trying to develop for the indirect TPMS. Yet even the improved system would lag far behind current direct
(continued...)

Further, NHTSA’s final rule does not provide incentives for improvement because it permits current indirect systems to satisfy the standard without any improvements. Without a technology-forcing mechanism in the rule, the industry is unlikely to have advanced the technology by November 2006. Furthermore, to allow speculation about the possibility of improvements to be used as a basis for denying consumers the immediate benefits of technology that can provide better safety today is irrational. *See National Mining Ass’n v. Mine Safety and Health Admin.*, 116 F.3d 520, 535 (D.C. Cir. 1997) (“That technology superior to extendable probes may eventually become available is no reason for not requiring probes in the meantime.”). The way to force advances in indirect technology would be to issue a stronger performance standard today, which would provide incentives for improvement in indirect TPMSs to meet the standard, if the technology were capable of such improvement. *See Natural Resources Defense Council*, 983 F.2d at 268-69 (where

¹³(...continued)
systems. Specifically, Toyota expects that “its next generation of indirect TPMSs . . . would be able to detect a 20 percent differential in tire pressure by monitoring resonance frequency as well as dynamic radius changes of the tires.” 67 Fed. Reg. 38710. Yet this level of performance would “be achieved only under ideal conditions, i.e., the vehicle is traveling in a relatively straight line at 30 to 60 km/h for at least 20 minutes.” *Id.* Thus, unlike current direct TPMSs, this improved indirect TPMS will not measure absolute pressure, only pressure relative to the other tires; and will not detect 20 percent underinflation as soon as the vehicle is turned on (or even within the ten minute period allowed by the current final rule), during city driving, or on winding roads.

statute requires absolute standard, not technology-based standard, rule must comply “with statutorily prescribed standards and time tables, irrespective of present technologies”).

“Motor vehicle safety is the paramount purpose” of Congress’s delegation to NHTSA, through the Secretary, of the authority to issue performance standards. *Motor Vehicle Manufacturers Ass’n*, 463 U.S. at 55 (quoting legislative history of Motor Vehicle Safety Act). As NHTSA repeatedly acknowledges, direct TPMSs perform better than indirect TPMSs and better fulfill Congress’s mandate. Having failed to provide a rational explanation for its decision to issue a rule tailored to the current capabilities of the less effective indirect systems, NHTSA has acted in a manner that is arbitrary, capricious, and contrary to the safety mandate of the TREAD Act.

III. NHTSA ACTED ARBITRARILY AND CAPRICIOUSLY IN WEAKENING THE FOUR-TIRE STANDARD BASED ON THE HOPE THAT INDIRECT TPMSs COULD SOMEDAY DETECT 25 PERCENT UNDERINFLATION, WHEN DIRECT TPMSs CAN DETECT 20 PERCENT UNDERINFLATION TODAY.

The proposed rule asked for comment on two performance standards, a four-tire, 20 percent standard and a three-tire, 25 percent standard. Not only did NHTSA weaken the latter, less stringent standard to meet the current capabilities of indirect TPMSs, it also weakened the stronger standard to meet what it expects will be the outer limit of indirect TPMSs’ future capabilities. More specifically, NHTSA’s final rule adopted a four-tire, 25 percent standard, rather than the proposed 20 percent standard,

expressly because even *improved* indirect systems are unlikely to be able to detect 20 percent underinflation. 67 Fed. Reg. 38705; *see also* A-132 (comments of TPMS supplier TRW stating that indirect systems could be improved to meet 25 percent standard). NHTSA expressed no reservations as to whether direct systems could meet a 20 percent standard. The possibility that indirect systems could be improved or hybrid systems developed to detect 25 percent underinflation is the sole reason offered by NHTSA for weakening the standard from 20 percent to 25 percent. 67 Fed. Reg. 38717-18.

NHTSA states that it “believes that the difference in benefits between TPMSs meeting four-tire, 20 percent requirements and TPMSs meeting four-tire, 25 percent requirements should not be substantial.” *Id.* at 38706. To begin with, that statement does not address the task assigned the agency by Congress. Furthermore, the statement is belied by NHTSA’s own conclusions about the benefits of these two alternatives: NHTSA estimates that, as compared to the 25 percent standard, a 20 percent standard would prevent an additional 1,549 to 1,889 injuries and 17 to 21 deaths per year. *Compare id.* at 38717, *with id.* at 38740. A 20 percent standard would also result in better fuel economy and longer tread life as compared to the 25 percent standard. *Compare A-98* (66 Fed. Reg. 38996), *with* 67 Fed. Reg. 38740. Moreover, because NHTSA assumes that both a four-tire, 20 percent standard and a four-tire, 25 percent

standard would be satisfied by installing direct TPMSs, the cost of meeting either standard would be the same.

The commentary accompanying the proposed rule makes clear that NHTSA believed that 20 percent underinflation was significant. *See* A-92 (66 Fed. Reg. 38990) (proposed definition of “significantly under inflated”). And the regulatory commentary makes clear that current direct TPMSs can detect 20 percent underinflation. 67 Fed. Reg. 38708; A-92 (66 Fed. Reg. 38990). Given NHTSA’s recognition that 20 percent underinflation is significant, and given the availability of technology that can detect 20 percent underinflation in any combination of tires, NHTSA acted arbitrarily in easing the performance standard for the purpose of accommodating the limitations of indirect TPMS technology.

CONCLUSION

For the foregoing reasons, this Court should declare NHTSA’s final rule purporting to implement the TREAD Act arbitrary, capricious, an abuse of discretion, and contrary to law, and remand to the agency with instructions that it promulgate a

rule requiring that, by November 1, 2003, all new light vehicles have a TPMS that can detect 20 percent underinflation in one or more tires.

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RULE 32(a)(7)(C) CERTIFICATION

Using the word count provided on our word processing system, I hereby certify that the above brief contains 12,294 words.

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CERTIFICATE OF SERVICE

I hereby certify that on this 9th day of December, 2002, I served the foregoing BRIEF FOR PETITIONERS on the parties listed below, by causing two true and correct copies thereof to be served by mail on counsel at the following addresses:

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