*286 U.S. App. D.C. 78; 912 F.2d 478, *;*
*1990 U.S. App. LEXIS 14728, **; 21 ELR 20170*

City of Los Angeles and City of New York, Petitioners v. National Highway Traffic Safety Administration, et al., Respondents, Automobile Importers of America, Inc., Ford Motor Company, General Motors Corporation, Intervenors. Center for Auto Safety, et al., Petitioners v. Diane K. Steed, Administrator, National Highway Traffic Safety Administration, et al., Respondents, Automobile Importers of America, Inc., Ford Motor Company, General Motors Corporation, Intervenors. People of the State of California, et al., Petitioners v. National Highway Traffic Safety Administration, et al., Respondents, Automobile Importers of America, Inc., Ford Motor Company, General Motors Corporation, Intervenors. Natural Resources Defense Council, Petitioner v. National Highway Traffic Safety Administration, Respondent, Automobile Importers of America, Inc., Ford Motor Company, The City of New York, General Motors Corporation, Intervenors. Center for Auto Safety and Public Citizen, Petitioners v. National Highway Traffic Safety Administration, et al., Respondents

Nos. 86-1649, 86-1651, 86-1652, 89-1277, 89-1403

UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

286 U.S. App. D.C. 78; 912 F.2d 478; 1990 U.S. App. LEXIS 14728; 21 ELR 20170

October 19, 1989, Argued
August 24, 1990, Decided

PRIOR HISTORY: [**1] On Petitions for Review of Rules of the National Highway Traffic Safety Administration.

CASE SUMMARY

PROCEDURAL POSTURE: Petitioners, a group of cities and states, and environmental groups, sought review of Rules of the National Highway Traffic Safety Administration regarding corporate average fuel economies for the model years 1987-88 and 1989.

OVERVIEW: Petitioners, a group of cities and states, and environmental groups, brought two separate challenges under the National Environmental Policy Act (NEPA) to the decision of the National Highway Traffic Safety Administration not to prepare an Environmental Impact Statement (EIS) covering its Corporate Average Fuel Economy (CAFE) standards for model years (MY) 1987-88 and 1989. As to MYs 1987 and 1988, the court held that petitioners, cities and states, based on their obligations under the Clean Air Act, had standing to sue under NEPA on air pollution grounds, but that their challenge failed on the merits. In a divided ruling, the court held that petitioner environmental groups had standing to challenge the MY 1989 standards on global warming grounds, but their petition was denied.

OUTCOME: Both petitions were denied. The petitioners, group of cities and states, had standing, but their challenge failed on the merits. The petitioners, environmental groups, had standing on global warming grounds, but a divided court denied their petition.

CORE TERMS: environmental, global, emission, mpg, warming, carbon dioxide, rollback, manufacturer, air, fuel, prepare, cumulative, polities, maximum, insignificant, fleet, environmental impact, causal, nonattainment, consumption, greenhouse, reduction, rulemaking, model years, pollution, nexus, tons, fuel economy, fuel-efficient, calculation

COUNSEL: Peter Lehner with whom Peter L. Zimroth, and William L. Waterhouse, for City of Los Angeles and the City of New York, Cornish F. Hitchcock, Alan B. Morrison, and Clarence M. Ditlow, III, for Center for Auto Safety, et al., and Theodore Berger, Craig C. Thompson, and Susan Durbin, for People of the State of California, et al., were on the joint brief for Petitioners City of Los Angeles and the City of New York, et al., in Nos. 86-1649, 86-1651, and 86-1652. Gary R. Netzer, Sr. and Roger J. Holt also entered appearances for City of Los Angeles and the City of New York.

Ralph C. Cavanagh with whom Richard E. Ayres, for Natural Resources Defense Council, Cornish F. Hitchcock, Alan B. Morrison, and Clarence M. Ditlow, III, for Center for Auto Safety and Public Citizen were on the joint brief, for Petitioners Natural Resources Defense Council, et al., in Nos. 89-1277 and 89-1403.

John A. Bryson and Barbara C. Biddle, Attorneys, Department of Justice, with whom Richard B. Stewart, Assistant Attorney General, Dirk D. Snel, John F. Cordes, Attorneys, Department of Justice, Kenneth N. Weinstein [**2] and Susan L. Rives, Attorneys, National Highway Traffic Safety Administration, were on the joint brief for Respondents in all cases.

Edward W. Warren with whom Frederick M. Rowe, John Gibson Mullan, Thomas L. Arentt, for General Motors Corproation, Charles H. Lockwood, II, and John T. Whatley, for Automobile Importers of America, Inc., James A. Brown, for Ford Motor Company, were on the joint brief for Intervenors General Motors Corporation, et al., in all cases. Arthur F. Sampson, III, David Norrell, and William L. Weber, Jr., also entered appearances for General Motors Corporation.

Peter L. Zimroth was on the brief for Intervenor City of New York in No. 89-1277.

JUDGES: Wald, Chief Judge, and Ruth B. Ginsburg, and D. H. Ginsburg, Circuit Judges. Opinion for the Court and dissenting on NRDC standing filed by Circuit Judge D. H. Ginsburg. Opinion for the Court on NRDC standing and dissenting on the failure to issue an EIS for Model Years 1987-1988 filed by Chief Judge Wald. Concurring opinion filed by Circuit Judge Ruth B. Ginsburg.

OPINION BY: PER CURIAM

OPINION

[*481] Opinion for the Court PER CURIAM.

Petitioners brought two separate challenges, under the National Environmental [**3] Policy Act (NEPA), to the decision of the National Highway Traffic Safety Administration (NHTSA) not to prepare an Environmental Impact Statement (EIS) covering its Corporate Average Fuel Economy (CAFE) standards for model years 1987-88 and 1989. As to MYs 1987 and 1988, we [*482] hold that the city and state petitioners, based on their obligations under the Clean Air Act, have standing to sue under NEPA on air pollution grounds, but that their challenge fails on the merits. Chief Judge Wald dissents from the disposition on the merits. She would remand to NHTSA for further explanation of the agency's conclusion that the 1987-88 CAFE standards would not have an environmental impact significant enough to warrant an EIS. However, she would leave the standards in place pending completion of a cumulative EIS, covering the entire CAFE program, that NHTSA has undertaken to prepare in 1990.

As to MY 1989, we hold that the Natural Resources Defense Council (NRDC), *et al.*, have standing under NEPA to challenge the MY 1989 CAFE standard on global warming grounds. Judge D. H. Ginsburg would dismiss the NRDC petition for lack of standing. He suggests that the petitioners have failed [**4] to explain how the injury they allege from global warming can be traced causally to the agency's decision setting the MY 1989 CAFE standard, and how the relief they seek could redress that injury.

On the merits of the NRDC petition, Chief Judge Wald would hold that NHTSA acted arbitrarily in concluding that the 1989 CAFE standard would not have a significant impact on global warming, and would remand to the agency; she would leave the standard in place, however, pending completion of the cumulative EIS. Judge Ruth B. Ginsburg would not disturb the agency's conclusion that no EIS was required. As a result, this petition, too, is denied.

CONCUR BY: GINSBURG

CONCUR

[*504contd] [EDITOR'S NOTE: The page numbers of this document may appear to be out of sequence; however, this pagination accurately reflects the pagination of the original published documents.]

GINSBURG, RUTH B., Circuit Judge, concurring:

I concur in full in Judge D. H. Ginsburg's disposition of the challenge of the city and state petitioners, on air pollution grounds, to NHTSA's CAFE rollbacks for MYs 1987 and 1988. As to MY 1989, I agree with Chief Judge Wald that NRDC has standing under NEPA. *See, e.g.,* [**5] *Public Citizen v. NHTSA*, 270 U.S. App. D.C. 199, 848 F.2d 256, 269 n. 2 (D.C. Cir. 1988) (Silberman, J., dissenting in part) ("Standing analysis is different under the NEPA, which confers a *procedural* right to have environmental impacts considered. A party is therefore 'aggrieved' if an agency fails to take the mandated procedural steps, provided the party actually asserts a bona fide environmental interest and is within the geographical area where the suspected impact is likely to occur.") (emphasis in original).* A testing question, in my judgment, is whether NRDC would have standing to complain in court had NHTSA failed to engage in *any*

environmental review, despite the directions contained in Council on Environmental Quality (CEQ) NEPA-implementing regulations. *See* 40 C.F.R. § 1501.1 *et seq.* (CEQ regulations); 49 C.F.R. § 520.1 *et seq.* (NHTSA's own parallel rules). If, as I believe, the answer to that question is "yes," then the adequacy of the agency's compliance, *i.e.*, NHTSA's preparation of an " environmental assessment" rather than a fuller impact statement, relates to the merits, it seems to me, not to threshold standing.

FOOTNOTES

* Our precedent seems to me sounder than atypical sister circuit decisions judging standing under NEPA more restrictively, *see* *Glover River Org. v. U.S. Dep't of Interior*, 675 F.2d 251 (10th Cir. 1982) , or homogenizing standing and merits inquiries, *see* *Evanston v. Regional Transp. Auth.*, 825 F.2d 1121 (7th Cir. 1987) .

[**6] Turning to the merits of NRDC's challenge, I call the close question, *see* Opinion of Chief Judge Wald at 22 (noting that "the merits question may be a closer one than the standing question"), in the agency's favor. I do so mindful of the deferential "abuse of discretion" standard governing judicial review of NHTSA's decision. I further include in the calculus considerations Judge D. H. Ginsburg places under a "standing" headline, particularly (1) NRDC's apparent acceptance of NHTSA's finding that the 1.0 mpg CAFE rollback at issue would yield "a maximum theoretical increase of less than one percent in greenhouse gases," EA Supplement at 8, and (2) NRDC's failure even to allege that such an increase "would produce any *marginal* effect on the probability, the severity, or the imminence" of the global warming disaster petitioners project. *See* Opinion of Judge D. H. Ginsburg at 9-10.

DISSENT BY: GINSBURG; WALD

DISSENT

[*482contd] [EDITOR'S NOTE: The page numbers of this document may appear to be out of sequence; however, this pagination accurately reflects the pagination of the original published documents.]

Opinion for the Court * filed by Circuit Judge D. H. GINSBURG. [**7]

FOOTNOTES

* Except as to Part I.A., NRDC's Standing (MY 89). *See* above.

D. H. GINSBURG, Circuit Judge:

The Energy Policy and Conservation Act of 1975 (EPCA) makes 27.5 miles per gallon the presumptive CAFE standard for Model Year 1985 (MY 85) and thereafter. The Act also authorizes the NHTSA by rulemaking to set a different standard, not lower than 26.0 mpg, for any individual model year at the level it determines to be "the maximum feasible average fuel economy level" for that year. 15 U.S.C. §§ 2002(a)(1), (4). The NHTSA exercised this authority to set the standard at 26.0 mpg for MYs 87-88 and at 26.5 mpg for MY 89. 51 Fed. Reg. 35,594 (1988); 53 Fed. Reg. 39,275 (1988). The Cities of New York and Los Angeles and the State of California (the polities), Public Citizen, the Union of Concerned Scientists, and the Center for Auto Safety challenge the agency's decision for MYs 87-88, while the NRDC, the Center for Auto Safety, Public Citizen, and the City of New [**8] York (hereinafter collectively referred to as the NRDC) challenge its decision for MY 89.

The NHTSA prepared an "environmental assessment" (EA) (an "environmental review" in the lexicon of 49 C.F.R. Part 520, but we adhere to the agency's misnomer) for each of the rulemakings, in order to determine whether the actions proposed would have a significant effect upon the environment. The NHTSA issued each EA at the same time as the Notice of Proposed Rulemaking to which it related -- in January 1986 for MYs 87-88, and in August 1988 for MY 89. It issued a Supplement to each EA when it issued the associated final rule -- in October 1986 and October 1988, respectively. (A revised version of the October 1986 Supplement was published later that same month, but appears not to have effected any major change in the analysis.) In each instance, the NHTSA concluded on the bases of the EA and the public comments thereon that the proposed rule would not "significantly affect[] the quality of the human environment," 42 U.S.C. § 4332, so that the agency was not required by the NEPA to prepare an EIS.

All petitioners other than the NRDC argue that the NHTSA should have [**9] prepared an EIS for the MYs 87-88 rule in order to assess the cumulative impact of that decision together with previous rulemakings setting the CAFE standard below 27.5 mpg, and in order to assess the effect of [*483] the new rule in areas that are already unable to attain the air quality levels required under the Clean Air Act. These petitioners also contend that the NHTSA arbitrarily failed to acknowledge a connection between increased tailpipe emissions and the increased fuel consumption that would assertedly accompany a reduction of CAFE standards. With respect to the MY 89 rulemaking, the NRDC contends that the NHTSA should have prepared an EIS in order to consider the adverse climatic effects of the increase in fossil fuel consumption that would result from setting a CAFE standard lower than 27.5 mpg.

I. STANDING

The Constitution requires that a complainant, to maintain a case in federal court, show that it has suffered "(1) 'some actual or threatened injury' that (2) 'fairly can be traced to the challenged action' and (3) 'is likely to be redressed by a favorable decision.'" *National Wildlife Federation v. Hodel*, 268 U.S. App. D.C. 15, 839 F.2d 694, 704 (D.C. Cir. 1988). [**10] In order to press this case under the NEPA, each petitioner must, in addition, show that the NHTSA's failure to prepare an EIS before setting the CAFE standard below the statutory default level of 27.5 mpg

"adversely affected" or "aggrieved" it, within the meaning of § 10 of the Administrative Procedure Act, 5 U.S.C. § 702, *i.e.*, that the NHTSA's omission "caused actual injury to an interest within the zone of interests protected by the statute allegedly violated," the NEPA. *Committee for Auto Responsibility v. Solomon*, 195 U.S. App. D.C. 410, 603 F.2d 992, 997 (D.C. Cir. 1979). If a petitioner can establish that it has suffered an injury within that zone of interests, it will necessarily have satisfied the constitutional injury requirement as well. In the NEPA context, "the creation of a risk that serious environmental impacts will be overlooked" is sufficient to establish the injury necessary for standing, "provided this injury is alleged by a plaintiff that . . . may be expected to suffer whatever environmental consequences the [decision] may have." *City of Davis v. Coleman*, 521 F.2d 661, 671 (9th Cir. 1975).

A. [**11] *NRDC's Standing (MY 89)*

According to the NRDC, the NHTSA's failure to prepare an EIS creates the risk that the agency will overlook the possibility that a CAFE standard below 27.5 mpg will lead to an increase in fossil fuel combustion that will, in turn, lead to a global increase in temperatures, causing a rise in sea level and a decrease in snow cover that would damage the shoreline, forests, and agriculture of California; and these local consequences of such a global warming would injure the NRDC's members who now use those features of California for recreational and economic purposes. According to the NRDC, this "catastrophic and permanent" change in the global climate would reduce yields from agriculture, increase urban smog, kill forests along climatic borders, and cause a two-foot rise in the sea level, thereby destroying 80% of United States coastal wetlands, forcing salt water into coastal drinking water supplies, and severely damaging shorelines and shoreline-related industries.

While the foregoing allegations make out injury indeed, the NRDC has failed to explain how that injury can be traced causally to the challenged decision and how the relief it seeks could redress [**12] the harm it foresees. "Though the concepts of traceability and redressability may differ in some respects, they are alike in focusing on the question of causation." *Haitian Refugee Center v. Gracey*, 257 U.S. App. D.C. 367, 809 F.2d 794, 801 (D.C. Cir. 1987) (opinion of Bork, J.); *see Allen v. Wright*, 468 U.S. 737, 753, 82 L. Ed. 2d 556, 104 S. Ct. 3315 n. 19 (1984) ("To the extent that there is a difference, it is that the former examines the causal connection between the assertedly unlawful conduct and the alleged injury, whereas the latter examines the causal connection between the alleged injury and the judicial relief requested.").

First, as to traceability: the NRDC has failed to explain how the environmental nightmare it hypothesizes could, if it were to come about, "fairly be traced" to the MY 89 CAFE standard being set at 26.5 rather than 27.5 mpg, or to its cumulative impact [*484] in conjunction with previous decisions to set CAFE standards for earlier model years below 27.5 mpg. Although the NRDC alleges a causal connection generally between fossil fuel combustion and damage to the environment, it does not dispute the NHTSA's finding [**13] that the 1.0 mpg decrement at issue here would produce "a maximum theoretical increase of less than one percent in greenhouse gases." In this circumstance, I think it clear that only the contribution that the NHTSA's decision makes to the projected catastrophe, and not the catastrophe as a whole, can "fairly be traced" to the challenged action. The NRDC makes no allegations, however, concerning the incremental harm wrought by the agency's decision.

Second, as to redressability: because the increase in greenhouse gases that the NHTSA's decision can be expected to generate is so small a contribution to the quantum necessary to produce the projected catastrophe, I cannot conclude, on the basis of the NRDC's allegations, that the injury asserted is "likely to be redressed by a favorable decision" on its petition. As we said in *Dellums v. U.S. Nuclear Regulatory Comm'n*, 274 U.S. App. D.C. 279, 863 F.2d 968, 980 (D.C. Cir. 1988), "When numerous third parties and independent variables lead to an injury, the complainant has the burden of showing that but for the particular governmental action that he is challenging, the injury would abate." The NRDC fails to satisfy these [**14] twin causal requirements; absent any allegation that the marginal impact of NHTSA's decision to set the MY 89 standard at 26.5 mpg may create a serious environmental harm that, without an EIS, would be overlooked, *see* *City of Davis v. Coleman*, 521 F.2d at 671, that decision appears to be but an insignificant tributary to the causal stream leading to the overall harm that the petitioners have alleged.

Indeed, the NRDC failed to allege that a 1.0 mpg reduction would produce any *marginal* effect on the probability, the severity, or the imminence of global warming. Without any allegation of an identifiable effect of this kind, and without any indication that the causal relationship between global warming and the volume of greenhouse gases is continuous, we have no basis for believing that setting the standard at 26.5 mpg rather than 27.5 mpg will have any impact at all. I, therefore, would hold that the NRDC lacks standing to seek review, and I dissent from the court's decision to the contrary.

Chief Judge Wald would apparently find that the causal requirements of traceability and redressibility are satisfied by allegations, not about the consequences of the decision [**15] under review, but about the seriousness of the global warming phenomenon in general, and about the need for overall reductions in carbon dioxide achieved not necessarily via the CAFE program, but "on a wide variety of fronts." Wald op. at 496. She would thus dispense with the requirement that a petitioner allege at least some threshold reason for believing that a serious environmental harm might be overlooked because an EIS was not done. Under her approach, it seems that any party would have standing to challenge any agency decision that, in its view, does not do enough to address the alleged problem of global warming. Under Judge Ruth B. Ginsburg's approach, a petitioner's failure to allege that the agency action will produce any identifiable marginal impact would not bar its standing to litigate the matter in federal court. It is not clear to me whether her position is materially different from that of Chief Judge Wald. It is clear, though, that if either of my colleagues' approaches were to prevail, the standing requirement would, as a practical matter, have been eliminated for anyone with the wit to shout "global warming" in a crowded courthouse. *Cf.* *Saltany v. Reagan*, 281 U.S. App. D.C. 20, 886 F.2d 438, 440 (D.C. Cir. 1989) [**16] ("We do not conceive it a proper function of a federal court to serve as a forum for 'protests,' to the detriment of parties with serious disputes waiting to be heard.").

B. *The Polities' Standing (MYs 87-88)*

The polities' claim to standing rests upon an entirely different footing. They assert that the CAFE standard of 26.0 mpg for MYs 87-88 adversely affects air quality [*485] in their urban areas,

making it more difficult for them to comply, as they must, with the air quality standards imposed upon them by the Clean Air Act:
Several states are considering or committed to more stringent VOC controls which are designed to achieve compliance in the near future. Such measures, such as controls on gasoline service stations, dry cleaners and even lawn mowers, are extremely costly and burdensome, and NHTSA's rule makes it more likely that these states will have to impose these and other additional control measures. Therefore, in a nonattainment area, in which the air quality is already worse than permitted, even the allegedly slight increase in air pollution caused by this rule will have a significant impact.

This is clearly a claim to suffer a constitutionally [**17] cognizable injury, namely, the increased risk that the agency might overlook these adverse consequences in reaching its decision without the benefit of an EIS. Unlike the environmental catastrophe projected by the NRDC, the injury asserted by the polities is "fairly traceable" to the challenged decision not to prepare an EIS; indeed, that decision is the exclusive cause of the harm they allege. The injury is also redressable, despite the passage of MYs 87 and 88 into history, because a manufacturer may carry forward to MYs 90 and 91 a deficit incurred in those earlier model years, and if left with a cumulative net deficit in MY 91, may carry back offsetting credits until MY 94. Therefore, if this court were to vacate the agency's decision for MYs 87-88 and to remand the matter for the NHTSA to prepare an EIS, the resulting agency decision could still affect manufacturers' incentives in marketing and designing their new cars. Finally, the environmental injury-in-fact of which the polities complain is clearly within the zone of interests that the Congress intended to regulate in enacting the NEPA. *Committee for Auto Responsibility*, 603 F.2d at 999.

Since we conclude [**18] that the polities have standing to challenge the NHTSA's decision not to prepare an EIS before issuing its final rule for MYs 87-88, it is not necessary to decide whether the Center for Auto Safety, Public Citizen, or the Union of Concerned Scientists, also have standing to challenge that decision. Their petitions for review were consolidated with those of the polities, and they joined with the polities in one brief. Therefore, nothing in our decision turns upon the question of their standing. *See* *National Federation of Federal Employees v. United States*, 284 U.S. App. D.C. 295, 905 F.2d 400, 403 & n. 4 (D.C. Cir. 1990).

II. THE MYs 87-88 RULEMAKING

Before assessing the rationality of the NHTSA's conclusion that setting the CAFE standard at 26.0 for MYs 87-88 would not significantly affect the environment, we turn to the petitioners' claim that the findings contained in the EA required the support of the more elaborate explanation contained only in the Supplement, which was released (in substantially final form) when the final rule was issued. Under regulations implementing the NEPA, an EA must be "prepared early enough so that it can serve practically as an [**19] important contribution to the decision-making process and will not be used to rationalize or justify decisions already made." 40 C.F.R. § 1502.5. According to the polities, the timing of the Supplement's release suggests that the NHTSA's decision not to prepare an EIS was not based upon the analysis in the Supplement, without which it must be considered unreasonable and unsupported.

It is clear from the face of the Supplement, however, that the NHTSA took into account, in its preparation of the final rule, the submissions that it had received during the period of public comment on the EA. Petitioners have suggested no basis for thinking that the EA was disregarded during the period in which both it and the final rule were in gestation, and there would be no more -- and no less -- reason to think that the Supplement was considered had it been released, as petitioners would seem to require, some months in advance of the final rule. We are satisfied that the information and analysis in the final Supplement was substantially available to agency decision-makers [*486] "early enough [to] serve practically" in the decision-making process.

In reviewing the decision of a federal [**20] agency not to prepare an EIS before embarking upon a proposed course of action, we are mindful of our limited role in ensuring, primarily, that no arguably significant consequences have been ignored; evaluating the "impact" of those consequences on the "quality of the human environment," however, is "left to the judgment of the agency," *Sierra Club v. United States Dep't of Transp.*, 243 U.S. App. D.C. 302, 753 F.2d 120, 128 (D.C. Cir. 1985), and we will intervene only where that judgment is shown to be irrational.

Public Citizen v. NHTSA, 270 U.S. App. D.C. 199, 848 F.2d 256, 267 (D.C. Cir. 1988).

In this case, the NHTSA did not prepare an EIS, because it determined in the EA that even the maximum possible hypothetical impact of its CAFE decision, and *a fortiori* the impact actually to be expected, would not have a significant effect upon the environment. In order to derive this most conservative estimate, it assumed that if the CAFE standard were 27.5 mpg, all automobile manufacturers could comply with it and would do so rather than incur a penalty, and that if the CAFE standard were set at 26.0 mpg, no manufacturer would [**21] exceed that level of fuel economy.

The NHTSA estimated that over the 10 year life of the MYs 87-88 fleet, the total increase in fuel consumption associated with the 26.0 mpg standard, as compared with the 27.5 mpg standard, would be 0.29 percent of national fuel consumption; this would lead to an estimated maximum 0.275 percent increase in the emission of Volatile Organic Compounds (VOCs) during MYs 87-88, with the maximum declining in later years as the fleet is retired. The agency concluded that this increase in VOCs would not have a significant impact either upon the general environment or upon the non-attainment areas represented by the petitioning polities, which it evaluated separately. With regard to vehicle operating (*i.e.*, tailpipe) emissions, the NHTSA found no basis for anticipating any increase as a result of the increase in fuel consumption:
There is no consistent correlation between car fuel economy and exhaust emissions. In fact, . . . it is possible for a larger, less fuel efficient vehicle to produce considerably less exhaust emissions than a subcompact vehicle of the same year of manufacture.

Finally, the agency "calculated the cumulative [**22] environmental impacts of th[e] rule by considering the effects related to the change [it had earlier made] in the MY 86 passenger car CAFE standard." It considered the maximum possible lifetime effect on gas consumption, and

the near term (1986-88) effect on VOC emissions, projected an "estimated long-term increase in cancer deaths . . . from 0 to 2.25," and concluded that there would be no significant impact upon the environment.

The NHTSA pointed out, moreover, that it anticipated actual increases in VOC emissions much smaller than it had assumed for purposes of the analysis. First, the agency expected that GM and Ford would in fact exceed the 26.0 mpg level for the model years in question, and that the actual CAFE of the Japanese auto manufacturers, and of Hyundai, Chrysler, and American Motors, would exceed even the maximum standard of 27.5 for those years, so that its conservative calculations greatly overstated the incremental emissions caused by setting the standard at 26.0 mpg. Second, the NHTSA predicted that the European manufacturers would be unable to meet a standard of 27.5 mpg and would choose to pay civil penalties, as a cost of doing business, rather than to modify [**23] their production plans for those years; as a result, the agency's conservative calculations also understated the emissions actually to be expected if the CAFE standard were 27.5 mpg. Both the overstatement of emissions with the standard at 26.0 mpg and their understatement with the standard at 27.5 mpg tended to exaggerate the environmental consequences of the two polar choices open to the agency.

The NHTSA also pointed out that the major domestic manufacturers would probably be unable to implement design changes sufficient to achieve a CAFE of [*487] 27.5 mpg for MYs 87-88. They would probably respond instead (assuming they did not elect to pay civil penalties) by imposing premia upon the prices of their larger, less fuel-efficient cars. In addition to causing some new car buyers to switch to more fuel-efficient cars, these higher prices would lead other potential consumers to retain their older, less fuel-efficient cars or to purchase less fuel-efficient light trucks. Again, therefore, the conservative calculations overstated the emissions at stake in the range of regulatory choices between 26.0 and 27.5 mpg; the likely actions of manufacturers and of consumers would diminish [**24] the environmental benefits to be gained, *ceteris paribus*, from opting for the higher standard.

The polities challenge the agency's reasoning on a number of grounds. *First*, they argue that the NHTSA failed adequately to assess the environmental impact of the MY 87-88 standard of 26.0 mpg, because it analyzed the increase in fuel consumption and the accompanying increase in VOC emissions in terms of their impact nationally, an approach that tended to diminish their apparent significance. According to the polities, the NHTSA should have instead compared the environmental impact of the proposed standard to "the effect of alternatives within the NHTSA's control, not to programs beyond its control or, indeed, beyond the control of the entire federal government." Thus they would require the agency to compare the environmental impact of the proposed standard to that of "alternative actions regarding the MY 1987-88 standard"; since the NHTSA used the full extent of its legal authority in setting the CAFE standard at the statutory minimum of 26.0 mpg, petitioners conclude that the decision it made is "the one with the largest environmental impact." This argument is without merit. That [**25] an agency exercises all the power with which it is vested in making a decision does not mean that the environmental impact of that decision will be significant. Environmental significance is a prediction about the real world, not a measure of the proportion of legal authority used. Unless the decision is significant in the real world, the agency has no duty under the NEPA to prepare an EIS.

Second, the polities argue that the NHTSA selectively compared some effects to "national indicia [that] would render all actions insignificant." Thus, it faults the agency for minimizing the apparent significance of an increase, with the CAFE standard at 26.0 mpg, of 5,512 tons of VOC emissions (0.275 percent nationally), while maximizing the apparent significance if the standard were 27.5 mpg, of the loss of 130,000 jobs in the domestic automobile industry (0.10 percent of the civilian workforce).

There are two problems with this argument. First, for the urban non-attainment areas represented by the petitioning polities, the NHTSA did translate the projected percentage increase in VOC emissions into specific tonnage estimates. The polities have given us no reason to question the agency's [**26] conclusion that VOC increases of 77.8 tons per year in New York City, 85.5 tons per year in the San Francisco Bay Area, and 202.8 tons per year in the South Coast Air Basin (Los Angeles, Riverside, and San Bernadino Counties) for MYs 87-88 will not have a significant impact on the environment in those areas. Second, the NHTSA did not use the FTC Staff's projection that, if the CAFE standard were 27.5 mpg, 130,000 workers might lose their jobs, as an index of environmental significance under the NEPA; instead, it referred to "significant job losses" only for the purpose of determining whether a standard of 27.5 mpg would be feasible under the EPCA, which incorporates "economic practicability" as a criterion of "maximum feasible average fuel economy," *see* 15 U.S.C. § 2002(e)(2).

Third, the polities argue that the NHTSA erred in dismissing as insignificant the "cumulative impacts . . . of this rule together with other CAFE amendments." The agency's worst-case cumulative analysis projected an additional 6.9 billion gallons of fuel consumed and an increase of 13,600 tons per year of VOC emissions. Contrary to the petitioners' claim, however, [*488] [**27] the agency did not without analysis "simply decree" these increases insignificant. Whilst reiterating its view that the worst case analysis is "inappropriate," the agency pointed out that the above-stated increases "constitute only 0.68 percent of total VOC emissions if the 27.5 mpg standard remained unchanged and the estimated maximum increase in cancer deaths ([3.6] over a period of 35 years) is only 0.24 percent of existing gasoline related cancer deaths." It concluded that these effects "are of low 'intensity,' within the meaning of the Council on Environmental Quality's Regulation defining the term 'significantly' (*see* 40 CFR § 1508.27(b))" as it is used in the NEPA. We see no basis here upon which to say that the NHTSA misapplied the concept of "significance." Petitioners call for more "analysis," but do not specify what they see as lacking or how "analysis" could supply the want. At some point -- here after a seemingly full treatment -- the agency must make a judgment. We discern no more from petitioners' argument than that they disagree with that judgment. Even were we to share their view of the matter, that would not be a sufficient basis for overturning the agency's [**28] decision.

Fourth, the polities challenge the NHTSA's calculation of the cumulative impact of its proposed standard, contending that the agency should have considered the impact of this standard upon the fuel economy of the fleets of manufacturers other than GM and Ford, and upon the incentives of all manufacturers to develop fuel-economizing technologies for future model years. In the latter regard, they argue that a CAFE standard of 26.0 mpg for MYs 87-88 will enable manufacturers to accrue a sizeable number of CAFE credits, which they can carry over into future deficit years, so that they will have a lesser incentive to develop more fuel efficient models for those years.

That the NHTSA focused primarily upon the effect that its standard would have on the fleets of GM and Ford is not a flaw in its analysis. Based upon its determination that the European manufacturers would not comply with a CAFE standard of 27.5 mpg and the prediction that the CAFE of American Motors, Chrysler, Hyundai, and the Japanese manufacturers will each exceed 27.5, the NHTSA reasonably "identified the car population potentially affected by a change in the MY 1987-88 standards as the combined GM and [**29] Ford fleets."

The petitioners apparently maintain that the NHTSA should have analyzed the environmental impact of the "competitive advantage" accruing to GM and Ford from setting the standard below 27.5 mpg. Why the lower standard will give an advantage to those companies and impose a disadvantage on the manufacturers whose fleets will average more than 27.5 mpg is not at all clear; the latter manufacturers exceeded the maximum CAFE standard that could lawfully be set, so presumably they were responding to the incentive of the market and expected to enjoy an advantage, not a disadvantage, by being more fuel-efficient than GM and Ford. Be that as it may, we hardly think it significant that the agency did not discuss the environmental consequences of this alleged competitive effect, in view not only of its uncertain direction but of its speculative nature, and from an environmental point of view, its seemingly trivial magnitude.

It is potentially more troublesome that, in analyzing the cumulative impact of its CAFE standard, the NHTSA disregarded the effect of the standard on the automobile manufacturers' incentive to innovate. Setting the CAFE standard at 26.0 mpg enables a manufacturer [**30] with a CAFE above 26.0 to accrue credits, thereby decreasing its incentive to develop new technologies in order to achieve a still higher CAFE in future model years. Conversely, had the NHTSA set the standard at 27.5 mpg, manufacturers unable to achieve that CAFE would have had an incentive to develop technologies that would enable them to offset their MYs 87-88 deficits with credits to be earned in future model years. Setting the standard at 26.0 mpg means foregoing the opportunity for this prodding, along with any environmental benefit that it would produce. [*489] The NHTSA's failure to include in its analysis the environmental effect of foregoing this potential incentive does not undermine the validity of its conclusions, however. In effect, the agency failed to consider the environmental benefit of causing some manufacturers to achieve the statutory target standard of 27.5 mpg sooner than they would have under a standard of 26.0 mpg. But, the environmental benefit of achieving the target standard sooner cannot exceed the environmental benefit of achieving that standard soonest, *i.e.*, in MYs 87-88. Because the NHTSA measured the hypothetical environmental benefit of universal [**31] compliance with that standard in MYs 87-88, the agency's conclusion that even this greater benefit is environmentally insignificant necessarily implies that the lesser environmental effect that NHTSA failed to measure is itself insignificant.

Fifth, the polities challenge the NHTSA's conclusion that the automobile manufacturers' actual, as opposed to hypothetical, responses to a 27.5 mpg standard for MYs 87-88 would not produce a significant improvement in the environment over a standard of 26.0 mpg. The polities contend that the agency reached this conclusion first by finding that 26.0 mpg was the "maximum feasible" standard under the EPCA, and then by reasoning that, because there was no feasible higher alternative, there would be no meaningful environmental impact merely from bowing to the inevitable. That approach would, of course, make the NEPA's requirement of an EIS meaningless where CAFE standards are concerned.

In the MYs 87-88 rulemaking, however, the NHTSA did not impermissibly link its findings under the two statutes. It did not base its conclusion under the NEPA -- that setting the CAFE standard at 26.0 mpg would not have a significant impact on the environment [**32] -- upon its conclusion under the EPCA that 26.0 mpg constitutes the maximum feasible standard. Instead, the agency predicted an insignificant environmental effect because of (1) the prospect that GM and Ford would respond to a 27.5 mpg standard either by choosing to pay civil penalties or by moving production of less fuel-efficient cars abroad, either of which steps would offset the environmental opportunity cost of a standard below 27.5 mpg; (2) its expectation that low gasoline prices would lead some consumers to keep their older, less fuel-efficient vehicles, or to purchase light trucks, rather than buy newer, more fuel efficient cars; and (3) data suggesting that actual CAFE levels would exceed 26.0 mpg even if that were the CAFE standard. While the NHTSA considered some of the same factors in making its decision about maximum feasibility under the EPCA, it separately assessed their environmental impact under the NEPA.

Sixth, the polities contend that the NHTSA failed to take into account the extent to which the 26.0 standard for MYs 87-88 will impede progress in bringing urban non-attainment areas into compliance with federal air quality standards: "the level at which an [**33] action becomes significant is substantially lower in a nonattainment area than in an attainment area," they say. The NHTSA was not oblivious, however, to the effect that its standards would have in non-attainment areas. As we have seen, the agency calculated possible increases in automotive emissions for New York City, the San Francisco Bay Area, and California's South Coast Air Basin, and found that the "maximum estimated percentage increase" would be only 0.27, which it held to be insignificant even in a nonattainment area. In addition, the agency found that environmental benefits flowing from increases in the CAFE standard for light trucks in MY 85 and thereafter would partially offset the effects of the MY 87-88 CAFE standard for passenger cars. EA Supp. 49-52. Petitioners have shown us no reason to believe that the NHTSA acted unreasonably in concluding that the CAFE standard of 26.0 would not impose any significant burden upon these non-attainment areas.

Seventh, the polities contend that the NHTSA failed to accord proper weight to the relationship between the CAFE standard and tailpipe emissions. The agency [*490] did a formal regression analysis of data for all MY [**34] 85 cars in order to test for such a relationship. The results, which are described in the Supplement to the EA, lead it to conclude that no significant increase in tailpipe emissions would ensue from the MYs 87-88 standard. While the polities would have liked the NHTSA to conduct a further study ranking cars in order of fuel efficiency and comparing the emissions of the most efficient with those of the least efficient, they offer no reason to question the accuracy or adequacy of the study that was conducted. We therefore defer to the expertise and informed judgment of the agency on this issue and hold that the NHTSA's failure to conduct yet another study was not arbitrary or capricious.

Finally, the polities claim that the NHTSA failed to follow its own guidelines, which call for the agency "ordinarily" to prepare a full EIS when an action it has proposed "involves inconsistency with any federal, state or local law . . . relating to the environment," or may "result in a significant increase in the energy or fuel necessary to operate a motor vehicle," or "in a significant increase in the amount of harmful emissions resulting from the operation of a motor

vehicle." 49 C.F.R. § [**35] 520.5(b)(5)(6). (Regarding the first of these guidelines, they contend that because the MYs 87-88 CAFE standard will result in increased VOC emissions, it is inconsistent with the plans that the Clean Air Act requires states and localities to develop for reducing emissions and complying with ambient air quality standards.) We do not read these guidelines, however, to require an EIS if the agency has, as here, defensibly concluded that no significant environmental effect will follow its decision. In the absence of any significant environmental effect, there is no basis for concern that the agency's decision is inconsistent with state or local environmental laws or plans; simply put, the purpose of the NEPA would not be served by such an exercise.

III. CONCLUSION

In light of the NHTSA's extensive evaluation of both the maximum and the likely impact that its MYs 87-88 standard would have on fuel consumption, VOC emissions, and tailpipe emissions, and its attention to the effects of the standard on urban non-attainment areas, we hold that the agency's action was not arbitrary, capricious, or otherwise contrary to law. At the same time, we note that the agency has since committed itself [**36] to preparing a cumulative EIS covering the entire CAFE program. *See* 54 Fed. Reg. 21,985, 21,996-97 (1989). That undertaking should provide additional assurance, beyond the EA done in connection with the MYs 87-88 rulemaking, that the agency is not making decisions with environmental consequences that escape its full consideration.

Accordingly, the petition for review of the MYs 87-88 rulemaking is denied. Because a majority of the court conclude that the NRDC has standing to challenge the rulemaking for MY 89, but only one judge would grant its petition, that petition, too, is denied.

So ordered.

WALD, Chief Judge: Opinion for the Court on NRDC standing and dissenting on the failure to issue an EIS for Model Years 1987-1988:

A majority of this panel holds that the Natural Resources Defense Council ("NRDC") has standing to challenge the Model Year ("MY") 1989 Corporate Average Fuel Economy ("CAFE") rollback. NRDC has adequately alleged environmental injury under NEPA that can be "fairly traced" to the National Highway Traffic Safety Administration's ("NHTSA") decision not to prepare an Environmental Impact Statement ("EIS"), and that could be redressed [**37] by a reversal of that decision. On the merits, however, a differently constituted majority of the panel holds that an EIS need not have been used for MY 1987-88. I dissent from that conclusion. I find NHTSA's reasoning inadequate in addressing the city and state petitioners' claims that the MY 1987-88 CAFE standard significantly affected their nonattainment area status under the Clean Air Act. Furthermore, I find that NHTSA did not adequately [*491] explain its reasons for concluding that the contribution of the MY 1989 CAFE rollback to environmental harm from global warming was not significant enough to justify an EIS. I would remand the cases for a more adequate explanation of why the CAFE rollbacks will not have a significant environmental impact. I do not, however, believe it is necessary to enjoin either the MY 1989 or the MY 1987-88 rollbacks at this time since NHTSA may satisfy the need for a more adequate explanation in

the programmatic, cumulative EIS it is now preparing on the entire CAFE program.

I. STANDING

The National Environmental Policy Act ("NEPA") is this country's "basic national charter for protection of the environment." Council on Environmental Quality [**38] Regulations, 40 C.F.R. § 1500.1(a). It requires federal agencies to prepare an EIS when they propose "major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C).

The reach of NEPA's procedural mandates is broad. Unless an agency has a clear and unavoidable conflict between its own statutory mandate and NEPA's requirements, it must comply with those requirements. *See* 42 U.S.C. § 4332; *Concerned About Trident v. Rumsfeld*, 180 U.S. App. D.C. 345, 555 F.2d 817, 823 (D.C. Cir. 1977) (rejecting "national defense" exception to NEPA). Congress imposed this mandatory duty because it recognized the inadequacy with which our country had dealt with "growing environmental problems and crises." S. Rep. No. 296, 91st Cong., 1st Sess. 4 (1969). In summarizing the legislative history on NEPA, the Senate Report explained that

> the pursuit of greater material wealth and increased productivity, the quest for scientific knowledge, and the requirements of worldwide responsibilities have had unplanned and often unforeseen consequences in the form of resource depletion, pollution, [**39] ill conceived urbanization, and other aspects of environmental degradation.

S. Rep. No. 296 at 13. That Senate Report lists numerous examples of environmental crises that had been inadequately addressed, including haphazard growth, pollution, degradation of ecosystems, deforestation, and the proliferation of pesticides and chemicals "without adequate consideration of the consequences." S. Rep. No. 296 at 4. The list, not surprisingly, did not include global warming and the greenhouse effect among its environmental nightmares, since those hazards were yet to be "discovered."

Nevertheless, the future-oriented scheme adopted by Congress was designed explicitly to take account of impending as well as present crises in this country and in the world as a whole. *See* S. Rep. No. 296 at 9. According to NEPA's drafters, the costs of past neglect of environmental crises "can no longer be deferred for payment by future generations," because "we no longer have the margins for error that we once enjoyed." S. Rep. No. 91-296 at 5. In introducing an early version of NEPA on the Senate Floor, Senator Jackson stated that

> [we must] anticipate environmental problems and develop [**40] strategies for their resolution before they reach the crisis stage. . . . It is far cheaper in human, social, and economic terms to anticipate these problems at an early stage and to find alternatives before they require the massive expenditure we are now obligated to make to control air, water, and oil pollution.

115 Cong. Rec. S3,700 (daily ed. Feb. 18, 1969) (statement of Sen. Jackson).

As enacted, NEPA embodies these principles in its declaration of national environmental policy. 42 U.S.C. § 4331. That policy states that one of NEPA's goals is to "fulfill the responsibilities of each generation as trustee of the environment for succeeding generations." 42 U.S.C. § 4331(b)(1). As part of that responsibility, an agency must examine the "relationship between

local short-term uses of man's environment and the maintenance and enhancement of long-term productivity." 42 [*492] U.S.C. § 4332(2)(C)(iv). Finally, agencies must recognize the *worldwide and long-range character of environmental problems* and, where consistent with the foreign policy of the United States, lend appropriate [**41] support to initiatives, resolutions, and programs designed to maximize international cooperation in *anticipating and preventing* a decline in the quality of mankind's world environment. 42 U.S.C. § 4332(2)(F) (emphasis added).

This case presents a new and potentially catastrophic environmental phenomenon that fits squarely within the broad NEPA framework just described. Its novelty presents jurisprudential challenges precisely because it is not yet fully understood. The government argues that NRDC lacks standing to bring a global warming challenge before this court because it has failed to establish an adequate link between the MY 1989 CAFE rollback of one mile per gallon and the potentially disastrous consequences of global warming. Under our past precedent, however, NRDC has fulfilled the requirements of NEPA standing.

For standing to challenge an agency's failure to comply with NEPA, a litigant must show that it has been "adversely affected" or "aggrieved" within the meaning of NEPA, and also that it is within the zone of interests protected by NEPA. *See* Administrative Procedure Act ("APA"), 5 U.S.C. § 702; [**42] *Public Citizen v. NHTSA*, 270 U.S. App. D.C. 199, 848 F.2d 256, 262 (D.C. Cir. 1988) (quoting *Committee for Auto Responsibility v. Solomon*, 195 U.S. App. D.C. 410, 603 F.2d 992, 997 (D.C. Cir. 1979), *cert. denied sub nom. Committee for Auto Responsibility v. Freeman*, 445 U.S. 915, 63 L. Ed. 2d 599, 100 S. Ct. 1274 (1980)). Additionally, a party must allege an injury that "fairly can be traced to the challenged action." *Committee for Auto Responsibility*, 603 F.2d at 997 (quoting *Simon v. Eastern Ky. Welfare Rights Organization*, 426 U.S. 26, 41, 48 L. Ed. 2d 450, 96 S. Ct. 1917 (1976)).

A. "*Aggrieved" Within Meaning of NEPA*

NEPA was designed to ensure that "important effects will not be overlooked or underestimated only to be discovered after resources have been committed or the die otherwise cast." *See Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 109 S. Ct. 1835, 1845, 104 L. Ed. 2d 351 (1989). The need to fully assess potential harm *before* a project is undertaken is a major justification for the broad test courts have laid down for NEPA standing. *See* [**43] *City of Davis v. Coleman*, 521 F.2d 661, 671 (9th Cir. 1975).

The procedural and informational thrust of NEPA gives rise to a cognizable injury from denial of its explanatory process, so long as there is a reasonable risk that environmental harm may occur. *See, e.g., Competitive Enterprise Institute v. National Highway Traffic Safety Administration*, 284 U.S. App. D.C. 1, 901 F.2d 107, 123 (D.C. Cir. 1990) (NEPA's purpose of ensuring well-informed government decisions and stimulating public comment on agency actions may lower the threshold for establishing injury to informational interests); *Public Citizen v. NHTSA*, 270 U.S. App. D.C. 199, 848 F.2d 256, 269 n. 2 (D.C. Cir. 1988) (Silberman, J., dissenting on other grounds) ("Standing analysis is different under NEPA, which confers a *procedural* right to have environmental impacts considered.") (emphasis in original); *see also* Fletcher, *The Structure of Standing*, 98 Yale L.J. 221, 258-62 (1988) (arguing for reinterpretation of broad standing

conferred in *United States v. Students Challenging Regulatory Agency Procedures*, 412 U.S. 669, 688, 37 L. Ed. 2d 254, 93 S. Ct. 2405 (1972) [**44] (*SCRAP*) as stemming from proper interpretation of NEPA's broad underlying procedural purposes). Within the NEPA context, then, a litigant is "aggrieved" by the agency's failure to prepare an EIS, when he can show that failure "creat[es] a risk that serious environmental impacts will be overlooked." *City of Davis v. Coleman*, 521 F.2d 661, 671 (9th Cir. 1975). If such injury is alleged by a litigant "having a sufficient geographical nexus to the site of the challenged project that he may be expected to suffer whatever environmental consequences the project may have," *id.*, then that litigant will have satisfied the injury requirement [*493] for NEPA standing. No one disputes that NRDC easily satisfies this threshold test for injury.

1. *Risk of Overlooking Serious Environmental Harm*

NRDC alleges that NHTSA's failure to conduct the thorough study anticipated by an EIS created the risk that it would overlook the global climate effects that may result from a lower fuel efficiency standard for cars manufactured in MY 1989. In particular, NRDC claims that without conducting a full-scale EIS, NHTSA can too easily dismiss the potential ill-effects of [**45] the extra carbon dioxide emitted as a result of the CAFE rollback on global warming. [1]

FOOTNOTES

[1] *See* NRDC Comments on NHTSA Proposal to Reduce Passenger Car Corporate Average Fuel Efficiency Standards for Model Years 1989 and 1990 (Sept. 14, 1988) ("NRDC Comments") Joint Appendix ("J.A.") at 542 (quoting respected scientists who confirm that the trend toward global warming has begun). Global warming refers to an average increase in global temperatures caused by human activities. Since the Industrial Revolution, millions of tons of gases -- carbon dioxide, methane, chlorofluorocarbons -- have spewed into the atmosphere and now act like the glass in a greenhouse. Much of the build-up of carbon dioxide and other gases is a result of combustion of fossil fuels, including gasoline. As the gases build up, they allow sunlight through to the earth but trap the radiant heat that would normally rise and dissipate into the upper atmosphere. As that heat is trapped, global temperatures rise. NHTSA's Environmental Assessment examined the CAFE rollback's effects on all of the greenhouse gases. For purposes of its global warming challenge, NRDC only took issue with NHTSA's evaluation of the consequences of increased carbon dioxide emissions. We limit our review to carbon dioxide as well.

[**46] According to evidence presented in the record, carbon dioxide is *the* most important greenhouse gas, accounting for about one-half of the predicted warming. *See* NRDC Comments at 8, J.A. at 545. The United States, in turn, accounts for about one-quarter of the world's carbon dioxide emissions (25-30% of U.S. emissions come from automobiles). *Id.* Based on this data, NRDC alleges that the single most important action the U.S. can now take to reduce carbon dioxide emissions is to lower our use of fossil fuels. *See* NRDC Comments at 10, J.A. at 547; Statement of Clarence M. Ditlow, III, at 3, J.A. at 566.

NRDC goes on to describe at length the serious environmental harm that will be overlooked by NHTSA's failure to examine the effects of the increased carbon dioxide emissions caused by the CAFE rollbacks in an EIS. *See* NRDC Comments at 3-5, J.A. at 540-42; Statement of Clarence M. Ditlow, III, at 3, J.A. at 566. As temperatures rise, the sea level will rise as well; the oceans will expand and polar ice caps melt; weather and rainfall patterns will be altered. One governmental model predicts, for example, that a 3 degree (F) rise in average temperature would triple [**47] the number of days above 95 degree (F) in the Corn Belt. A 3 to 9 degree (F) rise could cause the sea level to rise by one to four feet. A two-foot rise in sea level would in turn destroy 80 % of U.S. coastal wetlands, force salt water into coastal drinking water systems, and cause massive and sudden changes from coastal storms to shorelines. Such climatic changes would eventually affect the availability of arable land, the productivity of agriculture, the distribution of forests, the infusion of fresh water in lakes and streams, and the productivity of grazing areas and fisheries.

NRDC cites a Canadian-sponsored "World Conference on the Changing Atmosphere: Implications for Global Security," to corroborate its claim that global warming is a scientifically accepted environmental threat, requiring immediate action to reduce greenhouse gas emissions. The "Toronto Conference" brought together over 350 scientific delegates from 48 countries (including the United States) to study global warming, and in particular, to examine the remedial actions recommended by the United Nations' World Meteorological Organization. The conference recommended a 20% reduction of carbon dioxide emissions [**48] by industrial countries by the year 2005 and a 50% reduction worldwide by the year 2050. While some might take issue with the details of the Toronto timetable or remedial plan, no one, including NHTSA, appears to dispute the serious and [*494] imminent threat to our environment posed by a continuation of global warming. NRDC Comments at 5, J.A. at 542. [2]

FOOTNOTES

[2] Even those who have resisted setting specific goals on carbon dioxide emissions acknowledge that global warming is a threat. *See* N.Y. Times, Oct. 27, 1989, at A15, col. 1. While the Environmental Protection Agency ("EPA") has supported aggressive steps, the White House has opted to encourage further study. An executive summary of one study being awaited by the White House, an exhaustive scientific study by more than 300 experts brought together by the

United Nations, has reportedly concluded that if worldwide "business as usual" continues, the earth's global average temperature could increase by 5.4 degrees (F) by the end of the next century (producing, for example, a 25-26 inch rise in sea level). *See* Wicker, *Cheering a Flip-Flop*, N.Y. Times, June 21, 1990, A23, col. 1. See also Matthews, *The Greenhouse Effect: Apparently It's for Others to Worry About*, Wash. Post, July 4, 1990, at A19, col. 3 (discussing Western European and Japanese adoption of explicit national goals to cut emissions of greenhouse gases).

[**49] 2. *Geographical Nexus*

NRDC has thus shown that a serious environmental harm -- global warming -- is implicated in the failure to prepare an EIS. It has also shown that its members have a sufficient geographical nexus to the location at which the environmental consequences are likely to be felt. *City of Davis v. Coleman*, 521 F.2d at 671. According to NRDC's affidavits, the largest concentration of NRDC membership is in California, and the implications of the greenhouse effect for California are "particularly grave." Decl. of Ralph Cavanagh at 2, J.A. at 643. A substantially warmer atmosphere will threaten the state's extraordinary coastal and forestry resources as well as its massive agricultural system that depends primarily on water stored in the form of snow in its mountain regions. *Id.* at 3, J.A. at 644. As temperatures rise, the needed snow caps will melt, and the oceans will rise flooding California's coastline.

An affidavit from an individual NRDC member declares that he is an avid hiker and cyclist, regularly using and enjoying the wetlands, beaches, and forests in California that would suffer untold damage by steady increases in atmospheric [**50] temperatures. Decl. of James B. Frankel at 2, J.A. at 647. The same member-affiant is a farmer and vineyard grower by vocation who asserts that one source of his livelihood would be seriously jeopardized by the warmer climates spawned from the greenhouse effect. *Id.* Although the effects of a change in global atmosphere would obviously be felt throughout this country, and indeed the world, NRDC has satisfied the geographical nexus requirement of NEPA standing by showing the likelihood of particularly devastating consequences to NRDC members in California. *See also Oregon Environmental Council v. Kunzman*, 817 F.2d 484 (9th Cir. 1987) (although gypsy moth problem was widespread, Council members satisfied geographical nexus because they resided in a state especially affected by gypsy moths).

NRDC, then, has demonstrated that failure to prepare an EIS explaining the effects of the rollbacks on global warming presents the risk of overlooking an environmental injury that will personally affect its members. *Cf. Lujan v. National Wildlife Federation*, 497 U.S. 871, 110 S. Ct. 3177, 111 L. Ed. 2d 695, (1990) (denying standing where plaintiffs have not [**51] shown nexus between their use of unspecified lands "in the vicinity of" immense tracts of territory, on some portions of which mining activity has or might occur by virtue of agency action); *Allen v. Wright*, 468 U.S. 737, 82 L. Ed. 2d 556, 104 S. Ct. 3315 (1984) (rejecting claim of injury where

plaintiffs were not personally subjected to the racial discrimination about which they complained). Although the precise timing and scope of injuries due to global warming cannot yet be predicted with certainty, the very risk that such uncertainty will remain unevaluated if NHTSA does not prepare an EIS makes the NEPA injury even greater. The documented threat of such injury is enough to show that NRDC is "aggrieved" within the meaning of NEPA and has standing to challenge NHTSA's failure to prepare the EIS. *See* *Committee for Auto Responsibility v. Solomon*, 195 U.S. App. D.C. 410, 603 F.2d 992 (D.C. Cir. 1979) (threatened increases in noise and air pollution from offering parking spaces to [*495] federal employees for fees less than commercial rates established NEPA injury); *see generally* *Valley Forge Christian College v. Americans United for Separation of Church and State*, 454 U.S. 464, 472, 70 L. Ed. 2d 700, 102 S. Ct. 752 (1982) [**52] (party must personally suffer some actual or threatened injury); *Gladstone, Realtors v. Village of Bellwood*, 441 U.S. 91, 99, 60 L. Ed. 2d 66, 99 S. Ct. 1601 (1979); *Wilderness Society v. Griles*, 262 U.S. App. D.C. 277, 824 F.2d 4, 11 (D.C. Cir. 1987) (threatened injury suffices for standing if the injury is likely to occur to plaintiff's use and enjoyment of affected environment).

B. *Zone of Interest*

Given the broad congressional mandate of NEPA, it can hardly be argued that NRDC's concerns about global warming do not fall within the zone of interest of NEPA. As discussed above, NEPA commands agencies to "recognize the *worldwide and long-range character of environmental problems*." 42 U.S.C. § 4332(2)(F) (emphasis added). The environmental problems associated with increases in global temperatures may be complex, but the resultant harms are real and undisputed enough to fall within the areas of specific congressional concern.

Thus, NRDC, suing on behalf of its members, is "aggrieved" within the meaning of NEPA and falls within its zone of interest, thereby satisfying the injury-in-fact requirement of standing.

[**53] C. *Causation*

No one disputes the causal link between carbon dioxide and global warming. Our dispute with the dissent centers only on whether NRDC must establish, for standing purposes, that the incremental impact of those emissions resulting from the CAFE rollback has a significant effect on global warming. Judge D. H. Ginsburg would find that NRDC lacks standing because it failed to prove or even allege [3] the precise cause-and-effect relationship between the potential environmental consequences of global warming and a CAFE rollback of only one mile per gallon imposed on auto manufacturers. But Judge D. H. Ginsburg has used the wrong test for causation in the case of a NEPA plaintiff; he has fallen into the familiar trap of confusing the standing determination with the assessment of petitioner's case on the merits. *See* *Competitive Enterprise Institute v. NHTSA*, 284 U.S. App. D.C. 1, 901 F.2d 107, 113 (D.C. Cir. 1990); *Women's Equity Action League v. Cavazos*, 279 U.S. App. D.C. 34, 879 F.2d 880 (D.C. Cir. 1989). [4]

FOOTNOTES

[3] Judge D. H. Ginsburg erroneously asserts that NRDC failed to allege that the CAFE rollback

"would produce any *marginal* effect on the probability, the severity, or the imminence of global warming." D. H. Ginsburg op. at 484 (emphasis in original). Admittedly, NRDC did not prove the precise cause-and-effect relationship between the CAFE rollback and global warming. But in his declaration and comments for NRDC Ralph Cavanagh "described the threat of catastrophic climate changes in the decades ahead unless significant reductions in fossil fuel consumption can be achieved, including those potentially associated with improved fuel efficient standards." Decl. of Ralph Cavanagh at 2, J.A. at 643. Mr. Cavanagh also described specific injuries caused by global warming and alleged that in approving the CAFE rollback, NHTSA "increased the likelihood of all those injuries." *Id.* [**54]

[4] As I discuss below, I also believe NRDC has raised sufficient question about NHTSA's assessment of the significance of the increased carbon dioxide emissions resulting from the MY 1989 rollback to succeed on the merits of its challenge to NHTSA's failure to undertake an EIS. But that is a different issue from its ability to make the challenge in the first place.

To meet the causal nexus, petitioners need only show that the alleged injury is "fairly traceable" to the proposed action. *See* *Duke Power Co. v. Carolina Environmental Study Group*, 438 U.S. 59, 72, 57 L. Ed. 2d 595, 98 S. Ct. 2620 (1978). Moreover, we must read the causation requirement in standing with "an eye toward reasonableness." *National Wildlife Federation v. Hodel*, 268 U.S. App. D.C. 15, 839 F.2d 694, 710-11 n. 13 (D.C. Cir. 1988). [5]

FOOTNOTES

[5] Commentators have warned that where, as here, the relevant harms are probablistic and systemic, with widespread impact, courts must be especially careful not to manipulate the causation requirements of standing so as to prevent the anticipated regulatory beneficiaries from gaining access to court. *See* Sunstein, *Standing and the Privatization of Public Law*, 88 Colum. L. Rev. 1432, 1463 (1988) ; Meltzer, *Deterring Constitutional Violations by Law Enforcement Officials: Plaintiffs and Defendants as Private Attorneys General*, 88 Colum. L. Rev. 247, 304 (1988) (making same argument in context of constitutional claims).

[**55] [*496] That is especially true in the NEPA context. As we have recognized, the "limits to which NEPA's causal chain may be stretched before breaking must be defined by the policies and legislative intent behind NEPA." *Glass Packaging Inst. v. Regan*, 237 U.S. App. D.C. 378, 737 F.2d 1083, 1091-92 (D.C. Cir.), *cert. denied*, 469 U.S. 1035, 83 L. Ed. 2d 400, 105 S. Ct. 509 (1984). That legislative intent includes a strong mandate to anticipate, and where possible, avoid environmental crises through the explanatory and research device of an EIS. The "basic thrust" of NEPA's requirements is "to *predict* the environmental effects of proposed action *before* the action is taken and those effects fully known." *Scientists' Institute for Public Information, Inc. v. Atomic Energy Commission*, 156 U.S. App. D.C. 395, 481 F.2d 1079, 1092 (D.C. Cir. 1973) (emphasis added). If, as Judge D. H. Ginsburg argues, we force a NEPA plaintiff to prove or allege with exquisite precision how the agency action "*will* [cause] particular environmental effects, we would in essence be requiring that the plaintiff conduct the same environmental investigation [**56] that he seeks in his suit to compel the agency to undertake." *City of Davis v. Coleman*, 521 F.2d 661, 670-71 (9th Cir. 1975) (emphasis in original). A demand for that degree of certainty runs contrary to the broad remedial purposes of NEPA and is inconsistent with NEPA's standing jurisprudence.

Instead we have said in the past that the causal prong of NEPA standing in a case similar to this one is met by "the prospect that NHTSA would rescind its CAFE 'rollback' were the environmental consequences of the rollback spelled out in more detail in an EIS: . . . this would supply the required causal nexus between the agency's action -- failure to prepare an EIS -- and petitioners' 'environmental' injury." *Public Citizen v. NHTSA*, 270 U.S. App. D.C. 199, 848 F.2d 256, 263 n. 27 (D.C. Cir. 1988). NRDC, here as in *Public Citizen*, has claimed that if NHTSA fully considered the scientific data and literature on global warming, and fully examined the interplay of the increase in carbon dioxide emissions generated by the CAFE rollback with the growing body of scientific evidence suggesting that overall reductions in carbon dioxide must begin on a wide [**57] variety of fronts, it might well conclude that the rollback for MY 1989 was not warranted, thus alleviating the dangers from the increased carbon dioxide emissions.

And there is good reason to believe this might happen. In May 1989, NHTSA terminated its rulemaking procedure to amend the MY 1990 CAFE standard because of its conclusion that the country's need to conserve energy did not permit a standard below 27.5 mpg. *See* 54 Fed. Reg. 21,985, 21,986 (May 22, 1989). In that termination notice, NHTSA acknowledged the increasing awareness of the greenhouse effect and the role of oil conservation in reducing carbon dioxide emissions. It further recognized that carbon dioxide is a major greenhouse gas. *Id.* at 21,990. Finally, NHTSA conceded that, relative to the mid-1980s, it found a substantial and increasing need for the nation to conserve energy.

NHTSA's acknowledgement of the relationship between energy conservation, carbon dioxide emissions, and its CAFE standards came on the heels of communication to NHTSA from the EPA about global warming. Just two months after the MY 1989 CAFE rollback, the EPA informed NHTSA that vehicle energy efficiency [**58] improvements will be a major component in any future domestic or international response to concerns about carbon dioxide emissions. The EPA said it viewed a reduction in CAFE as "directionally wrong" as a general matter. *Id.* at 21,989. While NHTSA did not have the benefit of the EPA's view at the time of its

final decision on MY 1989, it is apparent that the EPA came to its conclusion based upon scientific and policy information that would have also been available to NHTSA had it conducted a full-scale EIS on global warming. NEPA requires each agency to undertake independent review of the environmental consequences of its action, not simply to wait for policy statements from the EPA. *See* 42 U.S.C. § 4332. Armed with that same information, [*497] NHTSA could reasonably have decided not to amend the MY 1989 standard as well.

Thus, Judge D. H. Ginsburg is wrong in asserting that NRDC must establish or even allege with precision the cause-and-effect relationship between the CAFE rollback and the serious environmental harms of global warming; our precedents require only that it show a reasonable likelihood that if NHTSA performed an [**59] EIS, it would arrive at a different conclusion about the CAFE rollback.

NRDC has certainly identified enough data preliminarily to support its case that a full-scale EIS could produce grounds to make NHTSA change its mind. NRDC has provided data to show that a reduction in the CAFE standard affects increases in gasoline consumption and carbon dioxide emissions in three ways, which synergistically contribute to the likelihood that the environmental injuries described above will occur.

First, over the 20-year lifetime of the MY 1989 fleet, the 5.2 million vehicles estimated to be produced by Ford and GM in MY 1989, will themselves consume an additional 900 million gallons of gasoline over what they would have consumed under the 27.5 mpg standard. [6] Each gallon of gasoline burned produces about 19.7 pounds of carbon dioxide. Accordingly, NHTSA estimated that the maximum carbon dioxide produced by reducing the CAFE standard for MY 1989 from 27.5 mpg to 26.5 mpg is *17.75 billion pounds* over the 20-year lifetime of the MY 1989 fleet.

FOOTNOTES

[6] NHTSA's calculations are presented in its Environmental Assessment for MYs 1989 and 1990 at A-6, J.A. at 211 and Supplement to the EA for MYs 1989 and 1990 at 23-26, J.A. at 262-65. Since MY 1990 is no longer at issue in this case, we have halved the estimates for purposes of this opinion. NHTSA based its estimates on the Ford and GM fleets because it estimated that the other manufacturers would meet or exceed the 27.5 mpg standard.

[**60] Second, NHTSA has continuously lowered the CAFE standard from its congressionally-imposed 27.5 mpg standard since MY 1986 for passenger vehicles, and for light trucks and vans from MY 1986 to MY 1991. [7] These actions have affected over 22 million vehicles. While NHTSA's calculations for the cumulative impacts on these decreases are somewhat difficult to follow, they apparently estimate the cumulative incremental increase in vehicle lifetime fuel consumption over the congressionally-established benchmark, to be a maximum of 2.63 billion

gallons. Since each gallon produces about 19.7 pounds of carbon dioxide, the cumulative net increase in carbon dioxide caused by these administratively-authorized departures is *51.8 billion pounds*.

FOOTNOTES

[7] NHTSA has just announced its CAFE standard for light trucks for MY 1992, and again concluded that the rollback would not significantly affect the environment. 55 Fed. Reg. 12,487 (Apr. 4, 1990).

Finally, while any rollback will most directly affect those manufacturers [**61] who would have failed to comply with a higher standard, it also has consequences for every other manufacturer as well, insofar as it affects their eligibility for credits toward deviations downward in future years. In *Public Citizen v. NHTSA*, 270 U.S. App. D.C. 199, 848 F.2d 256 (D.C. Cir. 1988), we stressed that the Energy Policy and Conservation Act's ("EPCA") provisions for carry-back and carry-forward credits were substantially likely to alter the manufacturers' incentives to produce fuel-efficient cars in future model years. *Id.* at 263. Yet, NHTSA totally fails to take into account these incentive effects of a reduced CAFE standard on compliant manufacturers. Instead, it proceeds on the assumption that those manufacturers that are already exceeding the CAFE standards will continue to do so, and will never use their credits *see* Supplement to EA at 14, J.A. at 253, an assumption that runs contrary to other evidence of manufacturers' past behavior. As we observed in *Competitive Enterprise Institute v. NHTSA*, 284 U.S. App. D.C. 1, 901 F.2d 107 (D.C. Cir. 1990), consumer demand has in recent years pushed manufacturers toward [**62] developing and marketing larger, less fuel-efficient vehicles. Credits earned as a result of a lower MY 1989 standard could well provide an additional incentive to other manufacturers to indulge such consumer [*498] preferences for size and weight over fuel efficiency.

So far NHTSA has countered all such evidence by the single device of transforming the substantial net increases of carbon dioxide generated by lower CAFE standards into percentages of the total estimated consumption and emissions from the entire passenger automobile fleet over the 20-year lifetime of the MY 1989 fleet (although NHTSA fails completely to estimate any potential increases in carbon dioxide from the other manufacturers' ability to earn CAFE credits to apply in future years). NHTSA calculates, for example, that a reduction in the fuel economy standard from 27.5 to 26.5 mpg in MY 1989 would result in an increase in carbon dioxide emissions of less than one percent over the 20-year period. [8] Judge D. H. Ginsburg has accepted this calculation, concluding that NRDC has not proven that global warming can be "fairly traced" to so small an incremental increase in major contributing gases.

FOOTNOTES

[8] Based on calculations for CAFE rollbacks in both MY 1989 and MY 1990, NHTSA

concluded that the annual increased production of carbon dioxide would be.13% over the lifetime of the MY 1989-90 fleet. *See* EA for MYs 1989-90 at A-5-6, J.A. at 210-11; Supplement to EA for MYs 1989-90 at 26, J.A. at 265.

[**63] Ironically, however, this methodology would permit virtually any contributory cause to the complex calculus of environmental harm to be ignored as too small to supply the causal nexus required for standing, and would call into question cases where we have found standing in the past. Thus, an increase in noise and air pollution from an individual parking lot in Washington, D.C. could almost certainly have been viewed as too minute a percentage of all the pollution from all of the area parking lots to meet the "fairly traceable" requirement for a metropolitan coalition for clean air. *See* *Committee for Auto Responsibility v. Solomon*, 195 U.S. App. D.C. 410, 603 F.2d 992 (D.C. Cir. 1979). The increase in auto emissions resulting from NHTSA's decision to lower the 1986 fuel economy standard could well have been described as too small a percentage of fleet auto emissions to provide standing for the citizen plaintiffs in *Public Citizen v. NHTSA*, 270 U.S. App. D.C. 199, 848 F.2d 256 (D.C. Cir. 1988). Yet, in both cases, this court had no difficulty finding a causal nexus for standing purposes between the agency's failure to conduct an EIS and increased [**64] pollution and lowered air quality. That is because the causal nexus test the court used was not the one employed by Judge D. H. Ginsburg, who insists on clear proof of a nexus between the action and the harm itself. Under the correct test, NRDC had only to show some likelihood that a full EIS would influence NHTSA's decision on the rollback, and it has provided sufficient data to do that.

This test does not, as Judge D. H. Ginsburg alleges, eliminate the standing requirement "for anyone with a wit to shout 'global warming' in a crowded courthouse." D. H. Ginsburg op. at 484. Clearly, NRDC has done more than shout "global warming." As discussed above, NRDC has pointed out the potential risk of overlooking (1) a conceded 17.75 billion pound increase of carbon dioxide over the 20-year lifetime of the MY 1989 fleet alone; (2) an over 50 billion pound increase in carbon dioxide emissions during the last four years of the CAFE program alone; and (3) the fact that the CAFE rollback may give compliant manufacturers an added incentive to use their credits and produce less fuel-efficient vehicles in the future. Because this evidence raises a "real possibility" that an EIS would provide further [**65] information that might influence NHTSA's decision, NRDC has satisfied the requirement for a causal nexus between NHTSA's decision not to pursue an EIS and the threatened environmental injury of global warming. *Public Citizen*, 848 F.2d at 263 n. 27.

D. *Additional Concerns About Redressability*

Judge D. H. Ginsburg accepts NHTSA's argument that NRDC does not satisfy standing requirements because even if this court vacated the CAFE rollback, ordered preparation of an EIS, and, in response, [*499] NHTSA raised the MY 1989 CAFE back to the statutory 27.5 mpg, NRDC's environmental injury still would not be alleviated. NHTSA argues that even if it raised the CAFE standard, manufacturers could outsource production to other countries since cars produced abroad are not required to meet the CAFE standard; they could rely on credits

from previous years rather than alter their fuel economy in MY 1989, or they could decide to pay the prescribed penalties for not meeting the standard. Consumers might also opt to hold on to larger vehicles instead of buying new ones, or purchase vans or small trucks which have even lower fuel economy, thereby actually increasing fuel [**66] consumption. According to NHTSA, any of these actions in response to the 27.5 mpg standard would mean no reductions in gasoline consumption or carbon dioxide emissions.

First of all, Judge D. H. Ginsburg's confusion about the proper test for causality infects his redressability analysis as well. NRDC need only show -- and it did -- that an EIS would redress its asserted injury, *i.e.*, that any serious effects in global warming will not be overlooked. It need not show that cancelling the rollback will alleviate global warming. *See, e.g.,* *Munoz-Mendoza v. Pierce*, 711 F.2d 421, 428 (1st Cir. 1983) (plaintiff need not show that use of mandated procedure would change agency's substantive action); *cf.* *City of Davis v. Coleman*, 521 F.2d 661, 670-71 (9th Cir. 1975).

But in any case, we have previously rejected similar arguments to those NHTSA now raises. Congress passed the CAFE standards to force manufacturers to produce more fuel-efficient cars. In a prior challenge to the CAFE standards, we said "if setting a higher standard cannot result in vehicles with increased fuel efficiency, then the entire regulatory scheme is pointless." *Center for Auto Safety v. NHTSA*, 253 U.S. App. D.C. 336, 793 F.2d 1322, 1334-35 (D.C. Cir. 1986); [**67] *see also* *Women's Equity Action League v. Cavazos*, 279 U.S. App. D.C. 34, 879 F.2d 880, 886 (D.C. Cir. 1989) (assuming termination of federal funding is highly effective in gaining compliance with federal antidiscrimination laws); *International Ladies' Garment Workers' Union v. Donovan*, 232 U.S. App. D.C. 309, 722 F.2d 795, 811-12 (D.C. Cir. 1983), *cert. denied*, 469 U.S. 820, 83 L. Ed. 2d 39, 105 S. Ct. 93 (1984) ("As Congress passed the [Fair Labor Standards] Act partly to provide redress to employers from unfair competition, the suggestion that effective enforcement of the Act will not have this effect directly contravenes the congressional judgment underlying the Act."). On the basis of this reasoning, it is clear that NRDC's injury could be alleviated by preparation of a full-scale EIS on global warming.

II. THE MERITS -- MY 1989 RULEMAKING

The NRDC has, therefore, sufficiently established its standing to challenge NHTSA's decision not to prepare an EIS. The next question is whether NHTSA acted arbitrarily when it decided that, despite the admitted link between carbon dioxide emissions and global warming, its CAFE rollback [**68] would not "significantly" affect the environment. I find that it did.

Pursuant to regulations, NHTSA prepared an Environmental Assessment ("EA") to determine whether the CAFE amendments for MY 1989 would qualify as a "major federal action significantly affecting the quality of the human environment." EA for MYs 1989-90, J.A. at 189; Supplement to EA for MYs 1989-90, J.A. at 238; *see* 49 C.F.R. § 520.3(a) & (b) and 40 C.F.R. § 1501.4(b) & (c) (1989). In its EA, NHTSA examined the increased carbon dioxide emissions that would result under a lower CAFE standard, and concluded that its rollback from 27.5 mpg to 26.5 mpg would not have a "significant" effect on global warming.

A decision not to prepare an EIS will only be overturned if it is "arbitrary, capricious, or an

abuse of discretion." *See* *Public Citizen v. NHTSA*, 270 U.S. App. D.C. 199, 848 F.2d 256, 265 (D.C. Cir. 1988). To make this determination, cases in this circuit use a four-part test, ascertaining:
(1) whether the agency took a "hard look" at the problem;

(2) whether the agency identified the relevant areas of environmental concern; [*500] (3) as to the problems studied and identified, [**69] whether the agency made a convincing case that the impact was insignificant; and

(4) if there was an impact of true significance, whether the agency convincingly established that changes in the project sufficiently reduced it to a minimum.

See, e.g., *Sierra Club v. Peterson*, 230 U.S. App. D.C. 352, 717 F.2d 1409, 1413 (D.C. Cir. 1983); *see also* *Sierra Club v. Department of Transportation*, 243 U.S. App. D.C. 302, 753 F.2d 120, 127 (D.C. Cir. 1985).

The critical inquiry in this case is whether NHTSA convincingly explained why the MY 1989 CAFE rollback would have an insignificant effect on the human environment. While *significant* impact has no determinate meaning, the statute requires the agency to make a rational prediction whether the time and expense of preparing a full EIS will be commensurate with the likely benefits of an evaluation more searching than the one made in preparing an EA. *See* *River Road Alliance, Inc. v. Corps of Engineers*, 764 F.2d 445, 449 (7th Cir. 1985), *cert. denied*, 475 U.S. 1055, 89 L. Ed. 2d 590, 106 S. Ct. 1283 (1986). Additionally, an agency's decision not to prepare [**70] an EIS will be considered unreasonable if the agency fails to "supply a convincing statement of reasons why potential effects are insignificant." *The Steamboaters v. Federal Energy Regulatory Commission*, 759 F.2d 1382, 1393 (9th Cir. 1985); *see also* *Arizona Public Service Co. v. Federal Power Commission*, 157 U.S. App. D.C. 272, 483 F.2d 1275, 1282 (D.C. Cir. 1973).

NHTSA insists that its judgment about the environmental effects of a CAFE reduction of one mile per gallon was an entirely rational one. NHTSA calculated the potential increase in carbon dioxide emissions resulting from a one mile per gallon lowering of the CAFE standard. NHTSA concluded that a one mile per gallon reduction would result in an increase in carbon dioxide emissions of 17.75 billion pounds over the fleet's 20-year lifespan. It then compared this substantial net increase to the total amount of carbon dioxide that would be emitted into the global atmosphere anyway. Using that calculus, the 17.75 billion pounds represented a less than one percent increment over existing emissions. The agency concluded that "a maximum, hypothetical fraction of one percent change in carbon dioxide [**71] produced over the lifetime of the affected fleet for MY's 89-90 is 'not significant.' " Supplement to EA at 17, J.A. at 256.

While NHTSA did the calculations necessary to determine how much extra carbon dioxide would be emitted, it failed completely to discuss in any detail the global warming phenomenon itself, or to explain the benchmark for its determination of insignificance in relation to that environmental danger. Had the emissions been slightly over one percent, would that have been significant? Without some articulated criteria for significance in terms of contribution to global

warming that is grounded in the record and available scientific evidence, NHTSA's bald conclusion that the mere magnitude of the percentage increase is enough to alleviate its burden of conducting a more thorough investigation cannot carry the day. *See, e.g.,* *Sierra Club v. Department of Transportation*, 243 U.S. App. D.C. 302, 753 F.2d 120 (D.C. Cir. 1985) (court upheld finding of insignificance where agency compared the increase in noise pollution resulting from the agency's action to a threshold established through detailed noise pollution studies).

Admittedly, we have in the [**72] past upheld NHTSA's decision that a 0.1 percent increase in fuel consumption would have an insignificant effect on air quality generally, although we were not faced with global warming concerns in that case and the possible increases in emissions were within Clean Air Act limits. *See* *Public Citizen*, 848 F.2d at 268. In *Public Citizen*, however, we rested, in part, our decision to uphold the agency on NHTSA's assertion that its decision about MY 1986 had been made under time pressure, that it set no pattern or precedent, and that in making its environmental assessments in future years, it could of course consider the cumulative impact of the MY 1986 rule. *Id.* The court relied on NHTSA's "asserted readiness to engage in continuing evaluation," [*501] to uphold the agency's decision against undertaking a more searching inquiry for MY 1986. *Id.*

Obviously, the comparative smallness of an injurious release is not always sufficient by itself to foreclose the necessity for an EIS. *See* *Foundation on Economic Trends v. Heckler*, 244 U.S. App. D.C. 122, 756 F.2d 143, 153 (D.C. Cir. 1985) (court invalidated NIH's decision not to prepare an EIS, [**73] because agency had simply issued a "mere conclusory statement that the number of recombinant-DNA-containing organisms will be small and subject to processes limiting survival"). In that case, petitioners had shown *why*, given the uncertainty surrounding recombinant-DNA, the court should be skeptical of a conclusion based merely on the size of the impact. Similarly, in this case, NRDC has shown *why* we should question NHTSA's reliance on its transformation of the substantial net increases in carbon dioxide discussed above to small fractional increases.

First, the evidence in the record suggests that we cannot afford to ignore even modest contributions to global warming. If global warming is the result of the cumulative contributions of myriad sources, any one modest in itself, is there not a danger of losing the forest by closing our eyes to the felling of the individual trees? Second, evidence in the record points out that international policymakers and scientists are calling for drastic reductions in carbon dioxide emissions to curb global warming. In the face of that evidence, how can we be sure without more explanation that increases of the magnitude of over 50 billion pounds [**74] of carbon dioxide over 20 years are really insignificant?

Third, given the strong legislative intent discussed above, that NEPA address environmental disasters *before* they occur, we must be more wary of an agency's conclusory judgment when we are facing a new and as yet not fully understood environmental phenomenon. Here, as in the case of recombinant-DNA in *Foundation for Economic Trends*, the agency and this court are asked to examine a new environmental phenomenon about which much uncertainty remains, but which will have serious global consequences. In this case, NHTSA made calculations, but then failed to explain *why* its numbers led it to conclude that the increased carbon dioxide would make an insignificant contribution to the global warming trend.

Fourth, I am concerned that NHTSA has inadequately considered the cumulative effect of its entire program of CAFE rollbacks. As discussed above, the agency's calculations on the cumulative impact are difficult to follow. Within those limitations, it is clear that the number of affected vehicles is enormous (over 22 million), and the volume of increased carbon dioxide is substantial (over 50 billion pounds). Moreover, [**75] the agency completely failed to take adequate account of the cumulative effect of CAFE's incentive effects on other manufacturers who may now be exceeding the CAFE level, earning substantial CAFE credits, and who may use those credits to lower their fuel efficiency in the future.

Given these shortcomings in NHTSA's EA, I conclude that while the merits question may be a closer one than the standing question, NHTSA's decision cannot be upheld. It has inadequately explained why the admitted increase in carbon dioxide is insignificant within the context of the environmental harm posed by global warming.

III. MERITS -- MY 1987-88 RULEMAKING

After carefully reviewing the EA for the MY 1987-88 rollback, I find NHTSA's explanation for finding the environmental effects from that rollback inadequate in two ways. First, the EA does not adequately address the claim made by the city and state petitioners that nonattainment areas face particular difficulties from a reduced CAFE rollback. Second, NHTSA did not sufficiently address the potential incentive effect of the lower standard on other car manufacturers.

A. *The Nonattainment Areas*

The cities of New York and Los Angeles are [**76] nonattainment areas for several pollutants, including carbon monoxide and ozone. *See* 40 C.F.R. § 81.305 (1988) (Los [*502] Angeles); *id.* § 81.333 (New York). That designation means that the concentrations of these pollutants in each city exceed the national ambient air quality standards established in the Clean Air Act. 42 U.S.C. § 7409. In nonattainment areas, emissions from a major new source must be more than offset by reductions elsewhere in the region. 42 U.S.C. § 7503. If the nonattainment areas do not achieve these standards, they are subject to serious penalties. 42 U.S.C. § 7503.

In the Supplement to its EA for MYs 1987-88, NHTSA concluded that the CAFE rollback could result in estimated increases in volatile organic compounds ("VOC") emissions of up to 77.8 tons/year in New York City, 85.5 tons/year in the San Francisco Bay area, and 202.8 tons/year in the South Coast Air Basin (the Los Angeles area). The city and state petitioners claimed that these amounts were significant because VOC emissions of greater than 40 tons/year exceeded the threshold that is considered a "significant" [**77] net increase for Clean Air Act purposes in nonattainment areas. *See* 40 C.F.R. § 51.166(b)(23)(i) (1988); *see also* South Coast Air Quality Management District Rules and Regulations § 1303 (defining an increase of 18 tons/year of nitrogen oxides or 13.7 tons of gases similar to VOCs as significant increase that must be offset).

In responding to these arguments, NHTSA fails to explain why increases in air pollution deemed significant by the federal and state governments under the rubric of other environmental laws are not significant under NEPA. First, NHTSA claims that the regulations were inapposite because

they referred to a threshold for new stationary source polluters. But, for purposes of determining a "significant" environmental impact, it is unclear from NHTSA's explanation why a single source versus multiple sources should be determinative.

Second, NHTSA falls back on its own calculations which show the maximum estimated percentage increase in VOC emissions to be.27%. As it did in the global warming context, it concluded that such a small fraction is not significant. In this instance, however, NHTSA was faced with evidence that Congress and other federal and state [**78] agencies have acted to curb net increases in amounts smaller than those resulting from the CAFE rollback, no matter what their percentage impacts might be. In the face of such evidence, NHTSA must explain how it came to its determination of insignificance. Its bald assertion that the percentage impacts are "tiny" and therefore insignificant does not represent reasoned decisionmaking.

Finally, NHTSA fails completely to explain how the cumulative effect it anticipates (cumulative increases of 13,600 tons/year of VOC emissions that would result from aggregating the MY 1986 passenger car rollback and the rollback of the MY 1986-88 light truck standards) will affect the nonattainment areas.

The Council on Environmental Quality regulations suggest that one criteria that agencies should use in determining the significance of its action is "whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment." 40 C.F.R. § 1508.27(b)(10). NHTSA's explanation wholly fails to explain why the net increases that will result from the CAFE rollback do not threaten the city and state petitioners in precisely this manner.

B. [**79] *CAFE Incentive Effects*

In its EA, NHTSA assumes that the car population affected by the MY 1987-88 rollback is the combined GM and Ford fleets. I have no difficulty with its decision to focus primarily on these noncompliant manufacturers. Nevertheless, as we have seen in prior CAFE cases, the CAFE rollbacks in any given year affect all manufacturers through the Energy Policy and Conservation Act ("EPCA") credit/penalty scheme. *See, e.g., Public Citizen v. NHTSA*, 270 U.S. App. D.C. 199, 848 F.2d 256 (D.C. Cir. 1988); *Center for Auto Safety v. NHTSA*, 253 U.S. App. D.C. 336, 793 F.2d 1322 (D.C. Cir. 1986).

I disagree with the majority that the lower standard serves only to decrease the incentive to develop new technologies in order to achieve still a higher CAFE in the [*503] future (although that in itself is a troubling prospect which NHTSA completely disregards). Indeed, NHTSA assumed that other manufacturers' product plans would remain unaffected by any lowering of the fuel economy standards. The ability of other manufacturers to earn CAFE credits, however, also permits them to meet recent consumer demand for bigger and less fuel-efficient [**80] vehicles in the future by reducing fuel efficiency. *See Competitive Enterprise Institute v. NHTSA*, 284 U.S. App. D.C. 1, 901 F.2d 107 (D.C. Cir. 1990). A mere assumption that such product shifts will not occur flies in the face of the substantial evidence in the administrative record that supported our findings in that companion case.

Without a more adequate explanation of why the CAFE rollback will not have detrimental and significant environmental effects on nonattainment areas, the EA does not represent reasoned decisionmaking.

IV. REMEDY

The proper course is to remand both the MY 1987-88 and MY 1989 rulemakings to the agency for a better explanation of its NEPA decisions. Under the peculiar circumstances of this case, there is no need to enjoin application of either CAFE rollback at this time, because the agency is already conducting a programmatic EIS which may yet provide an adequate explanation for its finding of insignificant impact. *See* 54 Fed. Reg. 37,702 (Sept. 12, 1989); *see also* *Sierra Club v. Andrus*, 189 U.S. App. D.C. 117, 581 F.2d 895, 904 (D.C. Cir. 1978), *rev'd on other grounds*, 442 U.S. 347, 60 L. Ed. 2d 943, 99 S. Ct. 2335 (1979) [**81] (no need for injunctive relief where agency had completed during the pendency of the appeal a programmatic EIS that adequately evaluated the environmental consequences of its action). According to NHTSA's notice, the programmatic EIS will include MYs 1987-88, MY 1989 and prior years. NHTSA also specifically mentioned both global warming and the impact of harmful emissions on large cities and nonattainment areas under the Clean Air Act as examples of environmental impacts on which it seeks additional comment. 54 Fed. Reg. at 37,703. This demonstrates that NHTSA is not simply avoiding consideration of the cumulative impact of the CAFE rollbacks, or engaging in improper segmentation of the CAFE program, so that each year, standing alone, falls below the EIS threshold.

The programmatic EIS has not, as far as we know, been completed. Nevertheless, given the timing of NHTSA's original notice, it would appear that it is well underway. 54 Fed. Reg. at 37,703 (requesting comments on its notice to prepare EIS by Nov. 12, 1989). Moreover, the ongoing nature of NHTSA's inquiry makes it superfluous to remand to the agency for a separate explanation of insignificance [**82] when such an explanation may well be forthcoming in the programmatic EIS. It may be that the EAs for MY 1989 and for MYs 1987-88 when read in conjunction with NHTSA's analysis in the programmatic EIS will provide the information necessary to enable NHTSA to make a reasoned decision about global warming consequences and the effects of harmful emissions on nonattainment areas. *See* *Southern Oregon Citizens Against Toxic Sprays, Inc. v. Clark*, 720 F.2d 1475 (9th Cir. 1983), *cert. denied*, 469 U.S. 1028, 83 L. Ed. 2d 372, 105 S. Ct. 446 (1984) (EA and programmatic EIS together must enable decisionmaker to consider the environmental factors and make reasoned decision).

That is not to say that NHTSA would satisfy its obligation in the programmatic EIS by merely concluding that impacts of less than one percent are automatically insignificant. An adequate programmatic EIS must do more to explain why such fractional increases in carbon dioxide as well as other harmful gaseous emissions are or are not a significant contributor to the global warming trend, based on available evidence about that trend. It should also explain how net increases in VOC emissions [**83] that have been labelled harmful in the Clean Air Act context could be insignificant for NEPA purposes. Therefore, any review of that document should, at a minimum, look for a more complete assessment of how the effects of potential increased emissions resulting from the CAFE program interact with the other known causes of global warming and how they affect nonattainment areas. It should also examine whether NHTSA has

adequately [*504] assessed the consequences of even small increases in carbon dioxide emissions in the face of increasing evidence that overall decreases are necessary to curb the global warming trend. This would help to ensure that NEPA's broad mandate will be fulfilled.

The remedy in this case, then, is not to enjoin application of either CAFE standard at this time. I would leave the MY 1987-88 and MY 1989 standards in place pending completion of the programmatic EIS. When the EIS is completed, either or both sets of petitioners would be permitted to bring any deficiencies in that EIS to the attention of this court as evidence that NHTSA did not adequately respond to our remand order.