

# Corporate Average Fuel Economy:

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## The Case for Repeal

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## EXECUTIVE SUMMARY

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In 1975, at the height of the energy crisis, Congress passed the Corporate Average Fuel Economy program, known as CAFE, as part of the Energy Policy and Conservation Act. CAFE mandates average fleetwide levels of fuel efficiency for cars and light trucks sold in the United States. Current CAFE standards are 27.5 miles per gallon for cars and 20.7 mpg for so-called light trucks (including SUVs and many mini-vans). President Clinton and Vice President Gore are on record as favoring a CAFE increase to 45 mpg.

The energy crisis was not caused by running out of energy resources. It was the fault of the government. During the 1970s, the Nixon, Ford, and Carter price controls on oil and gasoline were causing a severe decline in domestic oil exploration and refinement, while encouraging consumers to demand quantities of gasoline that could not be sustained at the controlled prices. By the mid-1970s, all exploration for new domestic sources of crude oil had come to a halt. The results were policy induced gasoline shortages and chaos in energy markets.

Instead of adopting the common sense approach of abolishing the price controls, Congress and the Carter Administration tried to curb energy demand by constraining the choices of American automobile consumers. The stated purpose of CAFE regulations was to increase fuel efficiency and reduce dependency on foreign oil. In reality, these regulations merely forced American consumers out of the cars and trucks they prefer and into the types of vehicles favored by legislators in Congress and bureaucrats at the DOT.

Abolition of energy price controls by President Reagan in 1981 brought a flood of new investment in oil and a decline in prices. The original misguided justification for CAFE disappeared. But during the 1980s, CAFE supporters shifted their argument from "managing an energy crisis" to "saving the environment". By the 1990s, the primary justification for continuing and raising the CAFE standards became to fight off the evils of global warming.

Since 1997, Congress has prevented increases in CAFE standards by refusing to fund the DOT office in charge of CAFE. Not only should CAFE regulations not be raised, they should be repealed.

Contrary to popular opinion, in economic terms, oil has become more and more plentiful. Even with the recent increase in prices, real gasoline prices are lower today than they were in the early 1980s. Even if this were not true, there would be no justification for public policies meant to encourage so-called "energy efficiency". As any resource becomes scarcer, prices rise to encourage a reduction in quantity demanded and a shift to substitutes. The conservation encouraged naturally by the market adjusts to the scarcity in the most efficient manner possible, and produces a far more efficient allocation of the resources than can be brought about by government management.

The assumption that CAFE regulations reduce gasoline consumption is at odds with economic analysis. As automobiles get higher gas mileage, the per mile cost of driving is reduced, encouraging an increase in the number of miles driven. A study in the journal *Applied Economics* concluded that "CAFE standards had no independent, statistically significant impact on ... the demand for gasoline ... " In addition, CAFE standards have led to smaller cars that carry fewer people. More cars may be needed to carry the same number of passengers, and passenger miles per gallon may decrease.

Policies that focus on reducing oil imports, or encouraging "energy independence" are also misguided. When refiners are free to purchase crude oil from wherever the price is the lowest, energy costs for everyone are minimized. Even if one accepts the goals of pushing fuel efficiency and energy independence beyond what the market would produce, CAFE standards are a poor means of attaining these goals. CAFE regulations have no effect on the relative prices of foreign and domestic oil, and so have no effect on the mix of foreign and domestic oil sources that is used. Indeed, usage of foreign oil has increased from 35% in 1974 to 48% in 1998.

The argument that an increase in CAFE standards would have any effect on future climate conditions is nonsense. The case that increased CO<sub>2</sub> emissions are causing or will cause global temperatures to rise significantly has yet to be made. In spite of the increase in atmospheric CO<sub>2</sub>, data from satellites and weather balloons show no statistically significant change in temperatures over the past twenty years. Even in the context of models that predict future global warming, no country reducing CO<sub>2</sub> on its own, especially from a single source like automobiles, could have any impact on the climate. A world-wide cutback in CO<sub>2</sub> emissions consistent with those being called for by the Kyoto Protocol would cool the earth by a virtually undetectable 0.13° F by 2050.

Worst of all, CAFE standards have led to increased highway fatalities. To meet the standards, auto manufacturers have had to make their cars smaller and lighter, providing less protection for drivers and passengers involved in accidents. Writing in the *Journal of Law and Economics*, economists Robert Crandall and John Graham concluded that from 14 to 27 percent of U.S. automobile passenger deaths are due to CAFE regulations. At that rate, CAFE standards were responsible for between 2,500 and 4,500 traffic fatalities during 1998 alone. Professor Graham, in a follow-up study, estimated that a jump in CAFE standards to 40 mpg would cause an additional 5.5% annual increase in highway fatalities.

CAFE standards restrict consumer choice and cost thousands of lives each year. There are no discernable benefits from the program. The original justification as a response to the 1970s energy crisis was misguided then and clearly has no merit today. Current arguments for increasing CAFE standards to fight global warming have no basis in sound science. Congress should save lives and restore consumer choice by abolishing the CAFE program.

# **Corporate Average Fuel Economy: The Case for Repeal**

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## **Introduction**

On May 24, 1999, more than 30 U.S. Senators sent President Clinton a letter calling for an increase in corporate average fuel economy (CAFE) standards. They said: "We are writing to urge you to work with Congress to implement the Corporate Average Fuel Economy (CAFE) law. The program is critical to reducing U.S. dependence on foreign oil, cutting air and carbon dioxide pollution, and saving consumers money at the pump." Previously, Congress voted to block any increase in CAFE standards. Which side is right? Do the CAFE standards make any economic or social sense?

In 1975, during the height of the energy crisis, Congress passed the Corporate Average Fuel Economy program, commonly known as CAFE, as part of The Energy Policy and Conservation Act. The Act, to take effect in 1978, mandated certain levels of fuel efficiency for cars and light trucks sold in the United States and empowered the Department of Transportation (DOT) to raise the standards in the future. Currently, CAFE standards are 27.5 miles per gallon for cars and 20.7 mpg for so-called light trucks (including sport utility vehicles and many mini-vans). These averages apply to the entire fleet of automobiles in each category sold by any company in the U.S. market selling more than 10,000 cars annually.

CAFE standards are an assault on individual liberty and have been shown to decrease auto safety, costing thousands of lives each year. Furthermore, studies in major refereed economics journals conclude that CAFE standards have had no impact on the level of gasoline consumption. In the face of Clinton Administration support for increases in the mileage standards, Congress froze them at current levels in 1997 by withholding funding for any tightening. There is no economic or environmental justification for CAFE. Not only should attempts to increase the standards be resisted, but Congress should restore free consumer choice to the automobile market by repealing the entire program. The claims made by the Senators quoted above in their letter to the President cannot withstand the scrutiny of careful analysis. They are either untrue, irrelevant, or both.

## **The Energy Crisis and Demand Management**

While new arguments for CAFE standards have come along over the last twenty years, the original concerns were twofold: fuel efficiency and energy independence. Both of these issues were driven by the energy crisis of the 1970s. During the 1970s, the Nixon price controls on oil and gasoline were causing a severe decline in domestic oil exploration and refining while

encouraging consumers to demand quantities of gasoline that could not be sustained at the controlled prices. By the mid-1970s, all exploration for new domestic sources of crude oil had ceased. Literally, no new wells were being drilled. Consequently, oil imports were on the rise, strengthening the power of the OPEC oil cartel. Presidents Ford and Carter continued price controls and President Carter instituted a "windfall profits" tax on the domestic oil industry, perpetuating the problem.

The Arab oil embargo of 1973 was a bad shock to the world oil market, but U.S. government policy made it worse. The embargo was aimed at the U.S. and the Netherlands in a dispute over Middle East policy. Oil could have been diverted to the U.S. from other sources, but the U.S. price controls prevented U.S. consumers from bidding for the needed supplies. The results were policy-induced gasoline shortages and chaos in energy markets.

After the shortages of 1973, instead of letting the market allocate the limited gasoline supplies efficiently, the government devised a regional allocation scheme mandating gasoline allocations to parts of the country based on past consumption patterns. This led to geographically perverse distributions of gasoline. During the Iranian "shortfall" of June 1979, while telling everyone to stay at home and drive less, the government sent gasoline to the tourist destinations popular the year before. The result was a serious gasoline shortage in the major cities and a glut of gasoline at the beaches and mountain resorts. Furthermore, the government resorted to odd/even gasoline rationing under which consumers were allowed to buy gas on alternate days of the week depending on the last number on their license plates.

Instead of placing the blame for this decade of chaos in energy markets where it belonged, on government-mandated price controls and regulations, blame was placed on consumers for their lack of concern for fuel efficiency and on OPEC. In the eyes of Presidents Nixon, Ford and Carter and a majority of the Congress of the period, consumers were using too much gasoline and refiners were using too much imported oil. Instead of adopting the common sense approach of abolishing the price controls, the three Administrations and their Congresses pursued a policy of demand management, attempting to constrain the choices of American automobile consumers.

CAFE regulations fit this "demand management" mentality. The idea was to force American consumers out of the cars and trucks they preferred and into the types of vehicles favored by legislators in Congress and bureaucrats at the DOT, i.e., cars that would use less gasoline.

In reality, the oil and gasoline shortages during the 1970s were artificially induced by price controls and were not being driven by market conditions of supply and demand. President Ronald Reagan and a new Congress abolished energy price controls in 1981, unleashing a flood of new investment in oil and a decline in prices. Indeed, in spite of the fact that gasoline taxes

are significantly higher today than they were in 1980,<sup>1</sup> the real price of gasoline is substantially lower today, even with the recent run-up in price in the winter of 2000.

By the early 1980s, it was apparent that the original misguided justification for CAFE had disappeared, that abolition of the standards was in order, and that free consumer choice should be restored. Despite the evidence, a continued failure to understand the central role of price controls in causing the energy crisis has led to an ongoing emphasis on "fuel efficiency" and on independence from foreign oil as ways of avoiding future shortages and energy crises.

### **"Fuel Efficiency" and Energy Independence: Misplaced Priorities**

The wrong goals. There is no reason why public policies of any kind should exist to discourage the use of gasoline and oil beyond those levels of consumption that are reached in a free market. Neither fuel efficiency nor independence from foreign oil should be goals unto themselves. To maximize **economic** efficiency is to obtain the greatest amount of output, consistent with consumer demands, from the least amount of input. Because of the profit motive, producers and entrepreneurs are always trying to find more effective ways to conserve resources. The incentive to minimize the cost of production instills in market participants the strongest possible conservation ethic consistent with providing the goods and services desired by consumers.

In this context, to focus on the "efficient" use of one input, energy or oil, is to ignore the inevitable tradeoffs. In production, one input or resource will be economized to the extent that further reductions in its use do not require the substitution and use of other resources that could be used more productively elsewhere. People will make similar decisions with respect to their uses of energy. For example, they will economize on the use of gasoline, home heating oil or air conditioning to the extent that the incremental savings that are realized are offset by the incremental sacrifices that they must make to obtain those savings. These sacrifices might include reducing their travel, increasing their risk of being hurt in an accident (more fuel efficient cars are lighter and, therefore, more dangerous), or decreasing their level of comfort. Energy, in this case oil and gasoline, is one input among many. To reduce its use implies either an increase in the use of other costly resources or the sacrifice of certain consumer goals. Consumers balance these considerations every day in choosing what to buy with their limited budgets, seeking to maximize their satisfaction with the resources on hand. To force consumers to sacrifice convenience that they are willing to pay for in order to over-economize on energy or to achieve excessive fuel efficiency, is to sacrifice overall economic efficiency and consumer satisfaction.

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<sup>1</sup>State excise taxes on gasoline more than doubled between 1980 and 1990 with an average annual growth rate of 6.4% falling to an annual rate of growth of 2.9% in the 1990s. Federal gasoline taxes have more than quadrupled since 1982. Stacy MacIntyre, "Motor Fuels Tax Trends and Assumptions," at [www.gils.doe.gov](http://www.gils.doe.gov).

Similarly, any policy that is focused on reducing oil imports and encouraging "energy independence" is also misguided. So long as gasoline producers are free to substitute one source of oil for another when scarcity conditions dictate, there is no need for policy makers to be concerned about the percentage of our oil needs that are being met by foreign sources. During the energy crisis, embargoes by Arab oil producing nations in 1973 and Iran in 1979 were shocks to our markets not because of the embargoes per se, but because of the system of price controls and political allocation that dominated energy policy. As noted above, these controls led to disruption of imports from alternative sources and a massive disinvestment in domestic oil production. Foreign producers of oil had power over our markets only because of the price controls that were in place. In contrast, during the cut-off of oil from Iraq and Kuwait in 1990, when there were no price controls and domestic consumers and producers were free to respond efficiently to the scarcities, there were no shortages and no crisis-like atmosphere. Prices rose for a very short period, encouraging both conservation on the part of consumers and increased productivity and output on the part of domestic and other foreign producers. The result was a very orderly response to the new conditions of scarcity.<sup>2</sup>

In the area of energy, as with all other areas of trade, consumers and the economy benefit from free trade. When refiners are free to purchase crude oil from wherever the price is the lowest, energy costs for everyone are minimized.

The wrong means. Even if one wanted to push fuel efficiency and energy independence beyond what the market would normally produce, CAFE standards are a poor means of doing so. Evidence suggests that neither fuel efficiency nor energy independence has been advanced by the fuel economy standards, and sound economic theory argues that we shouldn't expect them to be. First, there is no reason to expect that CAFE standards would reduce America's use of foreign oil. Even if CAFE leads to a reduction in oil usage overall, which it hasn't, the issue of foreign oil usage relates to proportions, not absolute quantities. There is no reason to expect CAFE to alter the proportional mix of foreign and domestic oil that is used. This would only be affected by changes in the relative costs of using the two sources. U.S. oil refiners would increase their use of domestic oil sources relative to foreign sources only if foreign oil became relatively more expensive. CAFE regulations have no effect on these relative prices and, therefore, have no effect on the mix of foreign and domestic oil sources that is used. Indeed, in spite of efforts to reduce the overall demand for oil in this country over the last 20 years, usage of foreign oil has increased from 35% in 1974 to 48% in 1998.

In fact, government policy may be tilting this ratio in favor of foreign oil. The supply of domestically produced oil has been kept artificially low by government restrictions on offshore

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<sup>2</sup>See Roy E. Cordato, "Gasoline Price Hikes: The Market is Working Just Fine," *IRET Byline*, No. 93, August 22, 1990.

drilling and drilling in Alaska. These supply restrictions reduce the availability of domestic sources of crude oil and, therefore, favor the use of foreign oil. The economically efficient way to eliminate this bias is to abolish or reduce these restrictions. That is, the answer is to be found in less government regulation of supply, not more government regulation of demand.

All the "benefits" assumed to flow from the CAFE standards stem from the assumption that the regulations lead to a reduction in the use of gasoline. But this supposition of reduced gasoline consumption is not consistent with economic analysis.

The most basic principle of economics is that the lower the cost of doing something, the more of it you will do. To the extent that automobiles get higher gas mileage, the per mile cost of driving is reduced. This means that higher CAFE standards would lead to an increase in the amount of miles that are driven. Better gas mileage leads to longer and more frequent trips. Depending on the extent to which people increase their time spent behind the wheel in response to the lower costs of driving, gasoline consumption could rise.

A comprehensive study in the journal *Applied Economics* concluded that "CAFE standards had no independent, statistically significant impact on...the demand for gasoline..."<sup>3</sup> This suggests that the behavioral effects associated with lowering the overall cost of driving completely compensates for the imposed mileage standards. Add to this the effects of significant declines in gasoline prices and increasing personal incomes, and the overall trend has been a continuous rise in gasoline consumption over the past 20 years since CAFE was instituted.

There is another reason why CAFE standards may work against the goal of decreased gasoline consumption. Since CAFE standards lead to smaller cars that carry fewer people, passenger miles per gallon of gasoline may decrease. Just ask any soccer mom about the value of larger cars for car pooling. Less gasoline is used if seven people use one minivan that gets 20 mpg than if they are transported three and four apiece in two sub-compacts that get 30 miles to the gallon. In fact, it takes a third more fuel to transport the seven people using the two more fuel-efficient cars.

Even if CAFE unambiguously led to a reduction in gasoline usage, it would not be justified on economic grounds. Indeed, the reduction itself would have to be considered inefficient because it would be inconsistent with optimal use of other scarce resources — in this case, wasting the time of a second driver — and would flout consumer preferences.

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<sup>3</sup>John W. Mayo and John E. Mathis, "The Effectiveness of Mandatory Fuel Efficiency Standards in Reducing the Demand for Gasoline," *Applied Economics*, 1988, Vol. 20, pp. 211-219.

There is no justification for public policies meant to encourage so-called "energy efficiency", regardless of how scarce the resources used to generate the energy become. As any resource becomes more scarce, prices adjust upward to encourage both a reduction in quantity demanded and a shift to substitutes. Nearly all economists will agree that markets are more likely to generate an efficient use of scarce resources than government management, and are less likely to be sidetracked by a political agenda. Consequently, the scarcer a resource is, the more important it becomes that its allocation be handled by the free market.

### **Global Warming and the Social Cost Case for CAFE**

During the 1980s, those favoring CAFE regulations shifted their argument from "managing an energy crisis" to "saving the environment". By the 1990s, the primary justification for not only continuing but raising the CAFE standards became to fight off the alleged problem of global warming. Consistent with the claims made by the Senators cited above, the Sierra Club has argued that "Increasing the fuel efficiency of automobiles is the biggest single step the United States can take to reduce the consumption of fossil fuels and the threat of global warming. We have a tool to achieve this goal in the form of CAFE standards."<sup>4</sup> Indeed, the Sierra Club has gone on to call for an increase in CAFE standards to 45 mpg for cars and 34 mpg for light trucks and sports utility vehicles based on the alleged relationship between automobile usage and global warming.<sup>5</sup>

The economic argument behind this justification for CAFE comes from what is known as the theory of social costs. This theory concludes that when the production or consumption activities of individuals generates unintended harmful effects on others, i.e., society, economic efficiency is compromised. Government regulation or taxation to curb the offending activity can then be used to enhance overall social welfare.<sup>6</sup> It is alleged that because automobiles emit carbon dioxide into the atmosphere as a by-product of burning gasoline, they contribute to an enhanced greenhouse effect and global warming which harms, or will harm, society.

CO<sub>2</sub> is a gas that is necessary for the existence of life. In addition to being an essential nutrient for plant life, it is also a greenhouse gas, meaning that it helps to trap heat from the sun,

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<sup>4</sup>"Sierra Club Global Warming and Energy Campaign: CAFE Campaign," found at [www.toowarm.org-/CAFE/cafe.html](http://www.toowarm.org-/CAFE/cafe.html).

<sup>5</sup>*Ibid.*

<sup>6</sup>For a critical discussion of this theory, see Roy E. Cordato, *Social Costs, Public Policy, and Freedom of Choice*, Fiscal Issue, No. 7, (Washington, D.C.: Institute for Research on the Economics of Taxation, 1992). For a discussion of social cost theory in the context of global warming, see Cordato, "Global Warming, Kyoto, and Tradeable Emissions Permits," *Studies in Social Cost, Regulation, and the Environment*, No. 1, Institute for Research on the Economics of Taxation, 1999.

keeping the earth warm and preventing it from freezing over. Fossil fuels, such as coal and oil, contain carbon which is released in the form of CO<sub>2</sub> when the fuels are burned. The global warming hypothesis (GWH) argues that, by burning fossil fuels for climate control, electric power, and transportation, humans are putting too much CO<sub>2</sub> into the atmosphere, causing excessive warming. According to the hypothesis, this excessive warming either is causing or will cause any number of problems, including additional floods and droughts, increased hurricane activity, the melting of polar ice caps, and rising sea levels.<sup>7</sup> If one accepts this hypothesis, then it can be argued that CAFE standards, by presumably reducing the amount of gasoline that is burned, can lead to a reduction in CO<sub>2</sub> emissions and reduce the chances that global warming and any attendant damages will occur.

There are several problems with this argument. As discussed above, even if one accepts the GWH and the idea that reduced gasoline consumption in the United States can help ameliorate the problem, it is not clear that CAFE leads to a reduction in gasoline consumption. If CAFE leads to increased gasoline consumption or leaves consumption unchanged, then the policy would not lead to reductions in CO<sub>2</sub> emissions. This means that the policy would have all costs and no benefits.

Furthermore, the case against using CAFE to fight global warming does not hinge on whether or not CAFE actually reduces gasoline consumption. There are three even more fundamental issues relating to the science of global warming. The first goes to whether there is any global warming problem to worry about and, therefore, whether there is the need for any policy at all. The second is the issue of whether changes brought about by one country manipulating one contributor to atmospheric CO<sub>2</sub> can have any appreciable impact in a global context. And the third relates to the strong possibility that increased atmospheric CO<sub>2</sub> brought about by human activities may actually have social benefits, including those that are typically associated with living and farming in warmer climates.<sup>8</sup>

First, the case that increased CO<sub>2</sub> emissions are causing or will cause global temperatures to rise significantly has yet to be made. Atmospheric CO<sub>2</sub> has risen over the past 50 years, but global atmospheric temperatures have not. Computer simulation models that are predicting future warming and that form the basis of the GWH, fail when tested against actual historical data. When these models are set to predict today's temperatures they tend to predict warming that is not occurring. Indeed, data from weather balloons and satellites (the most accurate source of global data) have shown no statistically significant change in temperatures over the past twenty

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<sup>7</sup>For an excellent and easy to understand discussion of the scientific questions related to global warming, see S. Fred Singer, *Hot Talk Cold Science*, (Oakland, CA: The Independent Institute, 1997).

<sup>8</sup>See Thomas Gale Moore, *Climate of Fear: Why We Shouldn't Worry About Global Warming*, (Washington D.C.: The Cato Institute, 1998).

years.<sup>9</sup> If these models cannot predict today's temperatures with any accuracy, it is ridiculous to rely on them to predict the global climate 50 to 100 years into the future. Furthermore, it is even more ridiculous, and in a free society, even immoral, to use such flimsy predictions to foster public policies that thwart individual rights.

Second, even within the context of models that are predicting future global warming, it is clear that no country reducing CO<sub>2</sub> on its own, and especially from a single source like automobiles, could have any impact on the climate. Studies have shown that even with a world-wide cutback in CO<sub>2</sub> emissions consistent with those that are being called for by the Kyoto Protocol, which would include a 7 percent reduction over 1990 levels by the United States, the earth would only be 0.13° F cooler by the year 2050. This amount would be unmeasurable with conventional thermometers.<sup>10</sup> Therefore, the claim that CAFE standards could have any meaningful impact on global climate is scientifically unsubstantiated.

Finally, it has been suggested that both enhanced atmospheric CO<sub>2</sub> and warmer temperatures, if they materialize, may be of net benefit to plants, wildlife, and people. Because CO<sub>2</sub> is "an essential nutrient for vegetation, an aerial fertilizer providing the carbon that plants use to make sugars, carbohydrates, and other compounds they need to live," agricultural scientists are beginning to argue that "higher CO<sub>2</sub> concentrations may be a boon, helping crops grow faster and yield more."<sup>11</sup> More CO<sub>2</sub> will also enhance agricultural production because it allows plants to utilize water more efficiently. A recent study by Graham Farquhar concludes that "doubling the CO<sub>2</sub> concentration is almost like doubling the rainfall as far as plant water availability is concerned...given that the availability of water for agriculture is already becoming such a problem, this aspect...of atmospheric change is a welcome one."<sup>12</sup> Farquhar's conclusion would imply that the doubling of the level of CO<sub>2</sub>, which is expected by some to occur around the middle of the 21st century, will mean that half as much water will be needed to grow the same amount of crops. In addition to the benefits associated with a CO<sub>2</sub> enriched atmosphere, the presumed resultant global warming would generate higher temperatures that would likely be a boon to health and agriculture. To the extent that global warming delays the first frost in the fall

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<sup>9</sup>John R. Christy and Roy Spencer, "Global Warming: Evidence From the Satellite Record," Environmental Studies Program, Competitive Enterprise Institute, Washington, D.C., from [www.cei.org](http://www.cei.org). Christ and Spencer are the scientists responsible for developing the satellite data.

<sup>10</sup>Thomas Wigley, "The Kyoto Protocol: CO<sub>2</sub>, CH<sub>4</sub>, and Climate Implications," *Geographical Research Letter*, Vol. 25, 1998 as cited in Patrick J. Michaels, "Long Hot Year: Latest Science Debunks Global Warming Hysteria," *Policy Analysis* No. 329, (Washington, D.C.: Cato Institute, December 31, 1998).

<sup>11</sup>Elizabeth Cullota, "Will Plants Profit From CO<sub>2</sub>?" *Science*, Vol. 268, May, 1995, p. 654.

<sup>12</sup>Graham D Farquhar, "Carbon Dioxide and Vegetation," *Science*, Vol. 278, November 21, 1997, p. 1411.

or brings about earlier thaws in the spring in more northern climates, crop yields will be increased, and the population will be better-nourished.

In addition, warmer climates tend to be healthier climates. Economist Thomas Gale Moore has calculated that if temperatures were 4.5 degrees warmer in the U.S., 41,000 fewer people would die each year.<sup>13</sup> People who advocate stricter CAFE regulations on the basis of their alleged CO<sub>2</sub> reducing implications, including the Sierra Club and those Senators who have signed the letter cited above, run head-on into these views among prominent agricultural and other scientists.

### **The Social Costs of CAFE**

The real social cost problems associated with CAFE are not those that it is supposed to ameliorate but those that the regulations themselves are causing. The most distressing aspect of CAFE standards is they have led to increased numbers of highway fatalities. To meet the standards, auto manufacturers have had to make their cars smaller and lighter, providing less protection for drivers and passengers involved in accidents. Since the 1970s, the average weight of a new car has decreased by 1,000 pounds. About half of this decrease is due to CAFE standards. The National Highway Transportation Safety Administration has concluded that for each 100 pound increase in the weight of new cars, 300 lives<sup>14</sup> would be saved and 10,543 incapacitating injuries<sup>15</sup> would be avoided annually. Writing in the *Journal of Law and Economics*, economists Robert Crandall and John Graham, in the most extensive study of this issue ever done, concluded that from 14 to 27 percent of this nation's automobile passenger deaths are due to CAFE regulations.<sup>16</sup> This means that CAFE standards were responsible for somewhere between 2,500 and 4,500 traffic fatalities during 1998 alone. These are very real harms that are being caused by CAFE standards. Yet those who favor the existence and even expansion of the standards express no concern about the carnage that they leave behind on our highways. Even if they believe that the alleged benefits of CAFE overwhelm these costs, it is incumbent upon them to show why this blood-for-oil tradeoff is worth it.

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<sup>13</sup>Moore, *op.cit.*, p. 120.

<sup>14</sup>NHTSA, "Relationship of Vehicle Weight to Fatality and Injury Risk in Model Year 1985-93 Passenger Cars and Light Trucks," April, 1997, [www.nhtsa.dot.gov](http://www.nhtsa.dot.gov).

<sup>15</sup>NHTSA, "The Effect of Decreases in Vehicle Weight on Injury Crash Rates," January, 1997, at [www.nhtsa.dot.gov/people/ncsa/sizerept.html](http://www.nhtsa.dot.gov/people/ncsa/sizerept.html).

<sup>16</sup>Robert W. Crandall and John D. Graham, "The Effects of Fuel Economy Standards on Automobile Safety," *The Journal of Law and Economics*, Vol XXXII, No. 1, April, 1989, p. 111.

Ultimately, though, the social costs of CAFE that are most frequently ignored come in the loss of individual freedom and consumer sovereignty. At its root, CAFE regulations show a disdain for the autonomy of consumers and the ability of citizens to make the choices that best suit their lives. The purpose of CAFE is to substitute the mandates of government bureaucrats for the freely made decisions of market participants. If consumers didn't desire the larger, safer, and more comfortable cars that CAFE standards effectively prohibit, these mandates would be unnecessary. For a country that has individual liberty as its basic philosophical building block, the cost to society of any loss of that liberty should be the first social cost to be considered.

## **Conclusion**

CAFE standards restrict consumer choice and cost thousands of lives each year. There are no discernable benefits from the program. The original justification of energy conservation, coming out of the 1970s energy crisis, was misguided then and clearly has no merit today. Sound economic theory suggests that CAFE would neither lead to reductions in overall gasoline consumption nor a reduction in the use of imported oil. But more importantly, even if the program did lead to such results, it would still not be justified. The forced conservation of gasoline over the results that would be obtained through free markets and purely voluntary exchange, generates a substitution, in both production and consumption, of more valuable resources for less valuable resources. Because of CAFE, overall social welfare and economic efficiency is being sacrificed at the alter of fuel efficiency. Furthermore, current arguments for either continuing or increasing CAFE standards to fight global warming have no basis in sound science. Congress should save lives and restore consumer choice by abolishing the program completely.

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Professor Cordato has had numerous publications including a 1992 book, *Welfare Economics and Externalities in an Open Ended Universe*, published by Kluwer Academic Publishers. His academic articles have appeared in economic journals, political science journals and law reviews. His public policy analyses have been published by IRET, The John Locke Foundation, Citizens Against Government Waste, The Ludwig von Mises Institute, the Cato Institute, The Competitive Enterprise Institute and The Reason Foundation. Dr. Cordato has also had his work featured in numerous newspapers and periodicals such as *The Christian Science Monitor*, *The Washington Times*, *Investor's Business Daily*, *The Journal of Commerce*, *Tax Notes*, *The Congressional Record*, *The Orange County Register*, *The Freeman*, *Liberty Magazine*, *The Charlotte Observer*, *The Raleigh News & Observer*, and *Human Events*, to name only a few.

Professor Cordato has presented his research at the annual meetings of the Southern Economics Association, the Eastern Economics Association, the Western Economics Association, the Public Choice Society, the Society for the Development of Austrian Economics, and the Association of Private Enterprise Education. In August 1995, Cordato testified at hearings of the National Tax Commission, appointed by Senator Robert Dole and Representative Newt Gingrich, and chaired by former Secretary of Housing and Urban Development, Jack Kemp.

Dr. Cordato presently serves on the Executive Board of Directors of the Association of Private Enterprise Education and on the academic advisory boards of the Ludwig von Mises Institute, the John Locke Foundation, and the Heartland Institute. In March of 2000, he was recognized as one of 16 recipients nationwide of the Leavey Award for Excellence in Private Enterprise Education by the Freedoms Foundation at Valley Forge, PA.

## ***ABOUT IRET***

IRET was founded in 1977 as a 501(c)(3) public policy research organization dedicated to the belief that constructive, free-market economic policies are essential for the nation's economic progress. To this end, IRET conducts research and analysis of the economic effects of tax, budget, and regulatory public policy initiatives. IRET is a leader in offering guidance to policy makers regarding fundamental tax reform that would eliminate the bias against saving and investment in the current tax system, including elimination of the estate tax, taxation of capital gains, and the double taxation of corporate income. IRET is also researching ways to replace Social Security with personal saving for retirement.

IRET has a reputation as a no nonsense resource for policy makers and opinion leaders. IRET relies on contributions from individuals, foundations, and corporations to perform its work. It accepts no government funding. IRET is the leading public policy institute in Washington focusing realistically on the growth aspects and economic consequences of federal policy changes.

IRET's resident and contributing economists prepare books, studies, bulletins, and Congressional advisories for publication and distribution to the Congress, the media, and the public. IRET scholars testify at Congressional hearings and consult with Members of Congress on legislation and economic issues, write opinion pieces for journals and newspapers, make radio and television appearances, and speak at conferences on economics and public policy.

IRET's late founder, Norman B. Ture, was a distinguished tax advisor to Congress and served as Under Secretary of the Treasury for Economic Affairs in the Reagan Administration. Dr. Ture played a central role in the development of the Economic Recovery Tax Act of 1981. IRET's current President and Executive Director is Stephen J. Entin. Mr. Entin is a recognized expert on taxation and Social Security. He was Deputy Assistant Secretary for Economic Policy at the Treasury Department in the Reagan Administration, and was instrumental in the development of the 1981 tax cuts, in particular, the "tax indexing" provision that keeps tax rates from rising due to inflation. Mr. Entin represented the Treasury Department in the preparation of the Annual Reports of the Board of Trustees of the Social Security System, and conducted research into the long run outlook for the system. He advised the National Commission on Economic Growth and Tax Reform (the Kemp Commission), assisted in the drafting of the Commission's report, and was the author of several of its support documents. Prior to joining Treasury, Mr. Entin was a staff economist with the Joint Economic Committee of the Congress, where he developed legislation for tax rate reduction (the Kemp-Roth bill) and incentives to encourage saving. Mr. Entin is a graduate of Dartmouth College and received his graduate training in economics at the University of Chicago.