

Testimony of Honda North America  
before the  
Committee on Commerce, Science and Transportation  
United States Senate

December 6, 2001

Good morning. My name is Edward B. Cohen. I am Vice President for Government and Industry Relations, Honda North America. We are delighted to once again appear before the Committee. As you will recall, we were pleased to testify on automotive fuel efficiency and technology before the Committee at its hearing on July 10, 2001. The focus of today's hearing and of our testimony is the various issues associated with the regulation of motor vehicle fuel economy. The recent report of the National Academy of Sciences (NAS) entitled "Effectiveness and Impact of Corporate Average Fuel Economy Standards" provides the Committee with a good point of departure for considering this complex technological, economic and public policy issue.

Since its beginning in 1948, Honda has been guided by its philosophy of providing clean and efficient products of the highest quality at a reasonable price to its customers worldwide. In 1974, the founder of our company, Soichiro Honda, said, "I cannot overstate the importance of continuing to cope with the pollution problem." In this spirit, we believe Honda's products – more than mere words – are the purest expression of Mr. Honda's commitment to the environment. And it is this commitment that has led to the can-do approach that has been the hallmark of Honda's efforts to meet the environmental challenge – while still meeting the needs of our customers.

In this coming year, for example, every vehicle that we sell in the United States will be categorized as a low emission vehicle (LEV) or better, and 40% are ultra-low emission vehicles. Every Civic we make is ULEV, the first complete ULEV model line to be sold in all 50 states. The 2000 Accord meets California's Super Ultra Low Emission Vehicle standard, emitting 96 percent less hydrocarbons than a typical car. The 2000 Honda Insight, which achieves an EPA rating of 61 mpg (city) and 68 mpg (highway), was the first gasoline-electric hybrid vehicle introduced in the United States. And this spring, we will introduce the all new Civic Hybrid – the first regular production vehicle that will be available with three different powertrains – conventional gasoline, compressed natural gas and hybrid engines.

In this same light, Honda's fleet has always been one of the most efficient in the nation. Our combined car and light truck CAFE average for 2001, based on NHTSA's mid-model year report, is 30.3 mpg. While fuel efficiency is a high priority for us, we know from our long experience with this issue that we must produce vehicles that our customers will want to buy. The challenge for all of us is finding the critical balance between overall societal needs (reduction of greenhouse gas emissions and reduced reliance on petroleum) with

the individual needs and demands of our customers. We look forward to and believe it is time for a constructive discussion about motor vehicle fuel efficiency. The goal must be to develop requirements that are fair and equitable for all manufacturers and that improve energy efficiency and resource conservation.

We commend the NAS on its report on fuel economy. While we do not agree with all the findings and recommendations, the Panel had a formidable task, which it completed on an extremely tight time frame.

As we will discuss, a number of the recommendations of the NAS on any future increase in CAFE parallel our thinking. The report recognizes the importance of providing adequate lead-time to design and introduce new technology to meet future standards. The report focuses on a 15-year timeframe. Certainly, the more significant the increase in the standard, the longer the lead-time needed. The report also discusses alternatives to the current CAFE program. We concur in the Panel's observation that some of these alternatives have the potential to reduce the nation's fuel consumption without the market distortions created by the CAFE system. We also note the report is not unanimous on its position with regard to safety. We have more to say about this critical issue later, but we concur that more research is warranted.

We believe that any future fuel economy requirements should be stated in terms of performance and be technology neutral. Standards should be set with due consideration of the challenges faced by manufacturers to offer consumers the mix of vehicles and vehicle attributes they desire. For these reasons, we believe that specific CAFE standards should be set by an expert agency, such as the National Highway Traffic Safety Administration, with direction and oversight from Congress.

### Policy Choices

The NAS stated that it is appropriate for the federal government to set fuel economy levels in order to achieve the twin goals of reducing greenhouse gas emissions and decreasing the level of petroleum imports. However, the NAS also pointed out that fuel economy standards alone are not sufficient to guarantee achievement of these twin goals. Consumer behavior, as reflected in vehicle miles traveled, fuel substitution, incentives and consumer demand for various makes and models also are critical factors. Similarly, the availability and price of gasoline (including the level of gasoline taxation) also directly influence consumers' purchasing decisions. When gasoline prices rose to close to \$2.00 per gallon earlier this year, customer demand for our fuel-efficient Insight also increased. The current system of CAFE standards does little, if anything, to influence these consumer-based factors.

### *Alternatives to CAFE*

The structure of any fuel economy requirement has significant impacts on how the program operates and its influence on the marketplace. One critical choice facing policymakers in

designing a fuel economy program is whether the fuel economy improvement will be certain or whether the costs of the program will be certain. Costs include not only dollar and cents impacts on the price of vehicles, but also trade-offs such as vehicle performance and convenience factors. The current CAFE structure fixes the fuel economy improvement, but its costs are very uncertain as it depends on future market choices, fuel prices and the rate of technology development. It cannot be predicted with much accuracy. If the CAFE level is set too high, the costs increase rapidly and may force sales of unwanted vehicles. If the CAFE level is set too low, cost effective technology may not be used, as there is little incentive to do more than the absolute minimum.

The NAS recognized this policy conundrum and observed that there are “. . .policies [other than CAFE that] could accomplish the same end at a lower cost, provide more flexibility to manufacturers, or address inequities arising from the present system.” (Finding 10). While the NAS was asked only to examine CAFE policies, alternatives to the current system, that warrant closer scrutiny by Congress, include tradable credits for fuel economy improvements, as well as feebates, higher fuel taxes, and standards based on vehicle attributes.

### *Attribute-Based Systems*

Among the alternatives evaluated by the NAS are fuel economy targets based on vehicle attributes such as size class or weight. This approach would make the vehicle mix each manufacturer offers in the marketplace less significant for the purposes of fuel economy compliance. At the same time, a weight-based system has a significant negative side, as manufacturers would get no credit for substitution of lightweight materials or better packaging efficiency. There simply would be no reward for such changes, and in fact, if not properly structured, there may even be an incentive for *increasing* weight. Significantly, these disincentives would not exist for a system based on size or vehicle class.

The NAS Committee seems to have opted for weight rather than size adjustments because of its belief that – due to safety considerations – it is important to eliminate influences toward small cars. It is significant that these safety considerations are the only issue that produced a dissenting opinion in the report. And Honda concurs with that dissenting opinion expressed by committee members David Greene and Maryann Keller that the data is insufficient to conclude that safety is compromised by smaller cars. The level of uncertainty about fuel economy related safety issues is much higher than stated in the majority report. Significantly, existing studies do not address the safety impact of using lightweight materials without reducing size, especially for vehicles with advanced safety technology.

As the dissenters state, “[t]he relationship between vehicle weight and safety are complex and not measurable with any degree of certainty at present.” We believe it is important to understand the differences between size and weight. We have demonstrated through the use of sophisticated engineering and advanced lightweight materials that smaller cars can be made increasingly safer. For example, Honda’s 2001 Civic Coupe, with a curb weight

of 2502 pounds, was the first compact car to receive a five star safety rating in the NHTSA crash results for the driver and all passenger seating positions in frontal and side crashes. The fuel economy of the Civic HX coupe with a continuously variable automatic transmission (CVT) and a gasoline engine is 40 mpg (highway) and 35 mpg (city). In addition, there are many ways to increase fuel efficiency that do not affect weight including power train technology and the efficient use of space.

Thus, vehicle design and size, and not just vehicle mass, must be considered when studying the relationship between fuel economy and safety. There are accident scenarios where less weight may actually be an advantage in some vehicle accidents. In others, it is a disadvantage. But, there is much we do not know. For example, to what extent can advanced crash avoidance technologies, such as forward collision warning/avoidance, lane keeping and road departure prevention, and lane change collision warning/avoidance systems, be employed to make weight considerations less relevant? To what extent can new, lightweight materials and sophisticated engineering provide a level of crash protection comparable or even superior to vehicles with traditional materials and designs? Honda supports the NAS recommendation that NHTSA undertake additional research to clarify the relationship of weight and size in the context of newly evolving advanced materials and engineering techniques in the array of accident scenarios that are encountered on American roads. There have been too many assumptions made in terms of the factors influencing fuel efficiency and safety. But there simply has not been the detailed analysis of the various crash dynamics and crash scenarios on vehicles with modern safety designs to draw any definitive conclusions.

#### The Introduction of Fuel Efficient Technologies and Importance of Leadtime

There is a popular misconception that vehicle manufacturers have not introduced fuel-efficient technologies since the mid 1980s. This is understandable, as the car and light truck CAFE have remained relatively constant for the last 15 years. However, the reason for this flat line is not a lack of technological progress. The combined fleet has gone down due to increasing light truck market penetration – and due to the increasing array of features demanded by customers. There has been a substantial amount of efficiency technology introduced by the industry in that time period. As EPA has reported in its 2000 Fuel Economy Trends Report, penetration of lock-up torque converters increased from just under 30% in 1980 to 100% in 2000. Similarly, the use of port fuel injection increased from 5% in 1980 to 100% in 2000. From its introduction in 1985, penetration of 4 valves per cylinder reached 40% in 2000. The dilemma facing manufacturers is that consumers may not value using these technologies to improve fuel economy given the relatively low price of gasoline.

These new technologies have been employed more to respond to vehicle attributes demanded by the marketplace than to increase fuel economy. Over the past two decades, consumers have insisted on such features as enhanced performance, luxury, utility, and safety without decreasing fuel economy. Although vehicle weight increased 12% from 1987 to 2000, the 0-60 time improved by 22% in the same time period. This is because

average horsepower increased by 70% from 1982 (99 hp) to 2000 (170hp). In addition, the proportion of manual transmissions, which are more fuel-efficient than automatic transmissions, decreased from 32% in 1980 to 14% in 2000. It is clear that technology has been used for vehicle attributes which consumers have demanded and value more than fuel economy.

If the current car fleet were still at 1981 performance, weight and transmission levels, the passenger car CAFE would be almost 36 mpg instead of the current level of 28.1 mpg. The trend is particularly pronounced since 1987. Based on EPA's data, technology has gone into the fleet from 1987 to 2000 at a rate that could have increased fuel economy by about 1.5% per year, if it had not instead focused on other vehicle attributes demanded by the market. There is no reason why this technology trend of improved efficiency (as opposed to fuel economy) should not continue.

This pace of potential improvement is significant in the context of the NAS finding that "[t]echnology changes require very long lead times to be introduced into the manufacturers' product lines." Accelerated mandates that are met through piecemeal modifications to existing vehicle designs rather than through integration of fuel-efficient technologies from the inception of a new vehicle design can have disruptive and undesirable effects. The NAS notes that the downweighting and downsizing that occurred in the late 1970s and early 1980s, may have had negative safety ramifications. But the ability to "design in" fuel economy from the beginning – through the use of aerodynamic styling, enhanced use of lightweight materials, and incorporation of the newest drivetrain technologies - can produce significant fuel savings with little sacrifice of other vehicle attributes that consumers desire. And I can say unequivocally that this has been Honda's experience.

#### Other Policy Options for Modification of the Existing CAFE Program

##### *Two Fleet Rule*

The NAS report raises a number of other critical issues about the current CAFE system that should be reexamined by Congress. For example, the NAS recommends abolition of the import/domestic split or two fleet rule. Honda agrees with this recommendation. Regardless of what the original purpose of the rule may have been, circumstances in the auto industry have markedly changed since the original statute was enacted more than 25 years ago. Significantly, a number of manufacturers have begun production in the United States. Honda, for example, now produces more than 75% of its cars for the U.S. market in North America. Just two days ago, we dedicated a completely new engine and motor vehicle manufacturing facility in Lincoln, Alabama where we will produce the Honda Odyssey – it is our 8<sup>th</sup> major plant in America. Depending on the formula used - and there are many - these vehicles contain between 70 and 90 percent domestic content. Over 90% of the steel used in these vehicles is domestic. Equally important, over 20,000 Americans are employed directly by Honda to design, develop, assemble, and sell these vehicles (This employment figure does not include the many tens of thousands employed by our U.S. suppliers and dealer network.)

The NAS believes the two fleet rule may act as a disincentive for manufacturers to increase the domestic content of their U.S.- built vehicles. Depending upon a manufacturers' global production plan, their more efficient vehicles may be made in the U.S. and thus are needed to be averaged with import vehicles to meet their CAFE obligations. Further, under CAFE, Canadian vehicles are treated as domestic, and soon as a result of the North American Free Trade Agreement, Mexican vehicles will be counted as domestic as well. The two fleet distinction already has been eliminated for trucks. It has outlived whatever usefulness it may ever have had.

### *The Distinction Between Cars and Light Trucks*

Another question inherent to the discussion of fuel economy policy is the viability of the current distinction between passenger cars and light duty trucks. When the CAFE statute was originally drafted, minivans were virtually nonexistent and SUVs were bought only by a small group of people who intended to use them off-road or for commercial uses. At that time, a distinction was needed for vehicles used for commercial and consumer purposes. Today, most light duty trucks are used as passenger vehicles and companies are building crossover vehicles that may fall in either a manufacturer's car or truck fleet. Thus, we caution that if cars and trucks are combined into a single fleet with a single standard, or if the same standard is adopted for both cars and light trucks, then there must be sufficient lead-time. Technology will help, but the lead-time must be sufficient. Timeframes reflected in the NAS report appear to be more reasonable. But we know of no technology or imminent breakthroughs that can take CAFE to 39 or 40 miles per gallon as some have proposed in a decade or so without severe marketplace disruptions.

### Uniform Percentage Increase (UPI)

Before concluding, we wish to highlight another important conclusion of the NAS report. The report unambiguously denounced an approach to CAFE that would require each manufacturer to improve its own CAFE by a specific target percentage. This is known as uniform percentage increases, or UPI. The NAS observes that such an approach would impose a higher burden on those manufacturers that have already done the most to help reduce energy consumption. Among its negative consequences, the NAS noted that UPI is generally the most costly way to meet an environmental standard, it locks manufacturers into their relative positions, thus reducing competition, and rewards those who have met only the minimum requirement. Most significantly, the NAS found that it punishes those who have done the most to help the environment and "seems to convey a moral lesson that it is better to lag than to lead." In short, the NAS found that such a system provides a strong incentive for a manufacturer not to exceed regulatory standards for fear this will lead to tighter regulations. As one company that would be particularly aggrieved by an UPI approach precisely because we have worked proactively and tirelessly to meet or exceed all requirements, Honda strongly endorses the NAS's position in condemning UPI. Similarly, an approach that allocates to each manufacturer total gallons to be saved would have many of the same negative implications as UPI. And, like UPI, it would freeze market

share of each manufacturer at current levels. How ironic it would be to effectively exclude from a new market a manufacturer like Honda that sells some of the most fuel-efficient cars in America.

### Conclusion

There are several basic rules that should apply to any approach to address fuel economy that Congress ultimately adopts:

- ◆ Any future fuel economy mandates must be equitable to all manufacturers;
- ◆ Those mandates must provide adequate lead time;
- ◆ They should reflect a basic understanding that technology is ever evolving;
- ◆ They must be applied fairly to all automakers; and
- ◆ They must ensure that manufacturers will be able to offer consumers the vehicles with the attributes they demand.

In short, this is a major challenge that will require all of us to work together. But for those of us at Honda, it is a challenge we will embrace with our can-do spirit -- for the benefit of our customers and society.

Thank you.