

STATEMENT OF SECRETARY OF TRANSPORTATION BROCK ADAMS BEFORE THE SENATE COMMITTEE ON COMMERCE, SCIENCE AND TRANSPORTATION, CONCERNING THE FUTURE OF THE AUTOMOBILE, TUESDAY, FEBRUARY 20, 1979

Mr. Chairman and Members of the Committee:

Thank you for inviting me to appear before you today to discuss the challenge I presented to the automobile manufacturers in Detroit last December to create a fundamentally improved automobile. We need an automobile that responds to the need to reduce our dependence upon foreign petroleum and which is at the same time safer, less polluting, easier to operate and maintain, and generally more "socially responsible" than the cars of today. And we need a basic research program to help get us there.

Last week in Boston, I met with a very distinguished gathering of scientists, engineers and other experts from all over the country so that we could generate ideas and stimulate thinking. We wanted to assess where we are today, so that we can plan where we need to be going. We wanted to know what is possible and what is reasonable, so that we can avoid trying for the impossible or demanding the unreasonable. We had a most productive two days and have, I believe, laid a firm foundation for our future efforts.

My challenge to the auto manufacturers was focused primarily on the period after 1985, by which time the manufacturers will have complied with the fuel economy standards that are now in place for 1985. Let me discuss briefly where we will probably be by 1985.

The auto of 1985 will not be radically different from the most advanced cars of today, but it will be substantially improved in many respects. It will be safer, more fuel efficient, less polluting, and less susceptible to damage than today's cars. Although smaller on the outside and lighter in weight, it will have all of the interior room and functional characteristics of today's cars. Many of the 1985 models will have front wheel drive, thus eliminating the intrusive transmission and driveshaft tunnel that interferes with seating and leg room. The 1985 model will have a choice of either air bags or automatic safety belts to provide a high level of crash protection to occupants. It will probably be powered by either a gasoline or Diesel engine, and it will have an improved, more efficient automatic transmission.

In short, the 1985 car will be a far cry from the cars of, say 10 or 15 years ago. Those cars did not have safety belts, dual braking systems, or side door beams; they had flimsy bumpers that offered little protection; and their engines could emit almost anything so long as it did not look or smell too bad when it first came out of the tailpipe. Despite this substantial improvement, however, there are not many aspects of the auto of 1985 that would astound the auto makers of the 1920's. Clearly, I could not make this statement with respect to airplanes, communications technology, or computers. We have made major progress in improving our automobiles, but we need to make much, much more.

It is with this in mind that I posed this challenge to the automobile manufacturers. To help in meeting the challenge, I proposed a national program of basic automobile research, involving all interested persons in the public and private sectors. This effort would produce a



pool of basic research technologies which would be available to all auto manufacturers for further individual development and commercialization. The future direction of this program is not fully developed at this time. Many aspects need to be worked out - technical content, institutional arrangements, and resource needs. All of these are being actively explored.

I proposed this basic research effort for three reasons. First, various studies, including our own, have shown that, despite the increased use of mass transportation in the urban environment and the increased use, especially with deregulation, of our air transportation system for intercity travel, the automobile will continue to be the dominant method of transportation in this country for the foreseeable future. As the oil embargo of 1973 demonstrated, we have grown so accustomed to the convenience and independence provided by our private automobiles that we are unwilling to give up our cars even when we have to wait in long lines at gas stations at 5:00 in the morning to use them.

The second reason is that this country cannot afford to continue its dependence upon foreign petroleum, both because of the uncertainty of supply that was all too well demonstrated in 1973 and is now being faced with recent events in Iran, and because of the adverse impact on the dollar and upon our economy which results from the dollar drain to the oil producing countries.

Thus, it is quite clear that we must begin now to develop a significantly improved automobile, responsive to the reality that it will continue to be our major source of transportation for years to come; and responsive to the reality that it must not continue to weaken the dollar and our economy.

This leads to my third reason. We will not see any significant improvement in the automobile without substantially increased efforts in basic research, followed by applied research, followed by development and commercialization. Historically, in the auto industry, as well as many other industries, the first step in this process, the basic research, has in large measure been supported or undertaken by other than private profit-making ventures. The potential benefit is often too uncertain and too distant in time for a profit-making venture to justify the expense. In addition, the auto manufacturers have indicated to me that, at this particular time, they are so engrossed in meeting the 1985 fuel economy standards that they indicate that they have no resources to devote to basic research that looks beyond 1985. Under these circumstances, I do not believe that the marketplace will create the significant improvement we need in the time frame in which we need it, and the government should play an active role in encouraging and facilitating the basic research that is too risky for the auto manufacturers to undertake on their own.

The Federal government is already involved in several areas of advanced applied automobile research, development, and demonstration, but this would be the first major involvement of the Federal government in basic automobile research. The applied research programs I am referring to include research in electric and hybrid vehicles and advanced heat engines, both under the Department of Energy, and the Department of Transportation's Research Safety Vehicle (RSV) program. The RSV program, which now has three automobiles under development, is designed to integrate and demonstrate the most advanced vehicle technologies available today for improved safety, fuel economy, emissions control, and damageability.



Two of the vehicles we have under development are probably indicative of what cars may be like in 1985 -- fuel economy consistent with the 1985 requirement of 27.5 miles per gallon, greatly improved occupant protection, and very low emissions.

The primary goal of my proposed national program of coordinated basic automobile research is to produce automobiles that either use substantially less fuel than today's cars, or that use a fuel that does not derive primarily from foreign sources, or both. I am undertaking this effort with the active support and coordination of several other Federal agencies, in order to take advantage of all the available expertise with the Government and in order to avoid any overlap of Government programs.

I would expect that this research will be performed not by the Government, but by the many people everywhere who have something to contribute -- automobile manufacturers, private research laboratories, universities, and others. With this broad base of participation in a widespread program of basic research coordinated by the Federal government, I would hope to produce a pool of technological options available to the public. However, I do not intend by this effort to get the Government in the business of designing or developing a commercially viable automobile. This should be done by those who are most expert at it - the automobile manufacturers. Thus, with the pool of options as a starting point, any automobile manufacturer can individually decide which technologies present sufficient potential to develop and commercialize in the years to come. In this way, some of the best minds will have contributed to a better automobile through basic research, and the auto manufacturers can individually put the results of that research to their best use.

This improved automobile can, of course, benefit our nation in more ways than just reducing our dependence upon foreign fuel. It will be more competitive in the international arena; it will have those features of comfort, convenience, and style that have traditionally been the hallmark of American cars along with the external size and fuel economy needed to make them practical in European, Japanese, and other markets; and it will help combat inflation in more ways than improved fuel economy - it will cost less to operate and maintain, and it will reduce the staggering toll on our economy from death and injuries on our streets and highways.

The main point that underlies all of this is that, if we wish to maintain the freedom of personal mobility we presently enjoy, we must begin now because fundamental changes in automotive technology require lead times of many years.

The first major activity in this effort was the technical conference which we held last week in Boston, through our Transportation Systems Center. Over 700 scientists and engineers from automobile manufacturers, private research laboratories, universities, and other organizations attended to help define the basic research directions that are most likely to lead to development and commercialization in the 1985-2000 time frame. The conference concentrated on three areas: engine development, to make a more fuel-efficient, less polluting engine; fuel and powertrain systems, to study alternate fuels and to consider methods of producing vehicle motion more efficiently from engine output; and structures and materials, to consider materials that can make the auto lighter, stronger, more durable, more crash-resistant, and easier to maintain. The conference participants were enthusiastic and presented extremely useful and diverse views.



I plan to hold another major meeting in April with technical people and others to discuss how this basic research will be carried out - who will participate, where it will take place, the coordination mechanism to help avoid duplicative efforts, and last but not least, how it will be funded.

In developing this program of basic research, I have attempted to structure it in a way that maximizes competitive efforts and allows the marketplace to have its greatest impact. Our experience has shown that, when shorter term development and commercialization activities are involved, we obtain the best result when the independent efforts of the auto manufacturers are competing against each other. We are in the process of considering ways of carrying out such a program of basic research. It is our current thinking that whatever mechanism we eventually propose, two criteria should be met -- first, the basic research effort should be open to any qualified person who wants to participate; and second, the basic research results will be available to the public, so that any auto manufacturer can take the basic research results it considers to be most promising, and individually develop and commercialize those aspects in competition with other auto manufacturers. Both of these criteria will help to preserve the competitive aspects of the program.

My legal advisors indicate that the use of this technique to produce the greatest technological advances in the shortest time is consistent with the purpose of the antitrust laws generally and with the Consent Decree in U.S. v. Automobile Manufacturers Association, Inc., et al., the antitrust case brought in 1969 against the automobile manufacturers in which the Justice Department alleged a conspiracy to delay the introduction of pollution control devices.

Mr. Chairman, I believe this is a vitally important undertaking. What we do here will help to determine the quality of personal transportation for the next generation of Americans. I think we have the opportunity to show the world that we, who first developed the inexpensive practical mass produced automobile, are still the technological leaders in this field.

I would be pleased to have the support of your Committee in this effort. I will keep you advised of further developments as we begin pursuing the research directions that were discussed in Boston.

That concludes my statement, Mr. Chairman. I will be pleased to respond to questions you may have on this matter.