



DEPARTMENT OF TRANSPORTATION

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STATEMENT OF CLAUDE S. BRINEGAR, SECRETARY OF TRANSPORTATION,
BEFORE THE SENATE PUBLIC WORKS COMMITTEE ON TRANSPORTATION
AND THE ENERGY CRISIS, DECEMBER 11, 1973.

Mr. Chairman and Members of the Committee:

I very much appreciate this opportunity to appear before you today to discuss transportation and the impact of the energy crisis. I will first discuss some broad issues. After that either I or my associates will be pleased to do what we can to answer your questions.

The Department of Transportation has been heavily involved in the efforts to cope with the emerging energy crisis for many months. Last spring, for example, a departmental task force undertook a series of studies on (1) current and projected energy usage of each major mode and (2) opportunities for energy conservation by mode that would minimize the impact

of fuel cutbacks. Most of this work was done at our Department's Transportation Systems Center in Cambridge. The report, which was completed in October, has been quite useful to the Administration as we have had to quickly gear up to deal with this sudden crisis. A copy of the report ("Transportation Energy Conservation Options") of this task force will be submitted for the record.

We have established an Office of Transportation Energy Policy, under an Assistant Secretary, both to help shape long-range transportation energy policy and also to deal with the immediate fuel shortages that face the various modes. And, I might add, to help handle the enormous amount of mail and phone calls this crisis is bringing forth.

I have directed our operating administrations--the Federal Highway Administration, the Federal Aviation Administration, the Federal Railroad Administration, the National Highway Traffic Safety Administration, the Coast Guard, and the Saint Lawrence Seaway Development Corporation--to do all they can to encourage efficient usage of energy in their modal regulatory practices and policies. Results to date are quite encouraging.

I am a member of the President's Emergency Energy Action Group and several of my associates serve on the Group's subcommittees. In addition to attending frequent meetings of that group, I also spend considerable personal time meeting with transportation people, both to keep up-to-date on the current energy situation in each industry and also to see what we can do to relieve immediate problems. Last week, for example, I met for several hours with various groups of the independent over-the-road truckers who are having great difficulty in purchasing adequate amounts of diesel fuel, and yesterday I met with three different airline groups. This afternoon I am meeting with a group of truck stop operators.

We also coordinate our efforts, as much as possible, with the energy actions of such regulatory agencies as the Interstate Commerce Commission and the Civil Aeronautics Board.

Let me now address some of the broader questions raised by the Committee.

1. Impact on Federal-Aid Highway Construction.

Two factors make it difficult to clearly assess the present impact of the fuel shortage on highway construction:

(1) Because of delays in passing the Act 1974 obligational authority was not received by the states until early October, and (2) for much of the country highway construction is now entering the low period in its annual cycle.

Nevertheless, from discussions with our division engineers and the state highway departments it is obvious that the impact is potentially serious. We are advised that a number of projects are being delayed because of the inability of contractors to make acceptable bids in the face of fuel quantity and price uncertainties. Some states have even been forced to cancel project lettings. Shortages are serious not only in fuel for use by contractors, but in such key commodities as reinforcing steel, aluminum, Portland cement, and asphalt.

Our Federal Highway Administration is working closely with the states to find the best approach to keeping essential construction underway. We are also working with the new Federal Energy Agency to make certain the fuel priority allocation process treats highway construction equitably.

We will soon have a firmer fix on the extent of the near-term delays and curtailments, and will advise this Committee of our findings as soon as possible.

Perhaps it's worth noting that our Highway Administration has already taken many steps to encourage reduced fuel usage. Examples include recommendations for less use of cutback asphalts, lower mixing temperatures of asphalts, and increased use of water emulsions. The Administration has made a detailed analysis of six possible future levels of activity, considering for each the impact on usage of fuel, cement, steel, and asphalt, as well as the impact on employment, safety, and overall costs.

2. Capacity of Mass Transit to Increase Passenger Service.

The present capacity of the Nation's mass transit systems to carry more people is quite sizable. However, numerical estimates are difficult because of peak-level problems.

Many bus and rail transit systems operate at 20-40% of capacity for most of the day, but then are pushed to or near capacity during the peak morning and evening hours. Thus, the problem becomes one of finding how to stretch out

the rush hour. Ways that we are encouraging such action include: (1) staggered work hours and (2) exclusive bus lanes in order to increase speeds and productivity of buses. We think such approaches, if widely used, could quickly add about 25% or so to available transit capacity.

More serious, in our view, than the capacity of existing transit systems is the inability of many communities to quickly add feeder service from residential areas that do not now have service to established transit lines. This is a problem our Urban Mass Transportation Administration is working on, but nothing can be done quickly.

The Nation's short-term capacity to manufacture new passenger buses and rail transit cars is modest. The present total in use is about 50,000 buses and about 10,000 rail cars. Roughly 3,500 buses and 550 rail cars are scheduled for production in 1974. This new equipment is largely scheduled as replacements, but in an emergency I'm sure most of the older pieces could be kept going for a few more years.

Our present all-out National production capacity is about 15,000 transit buses per year (a two-shift, overtime basis). Because of component shortages, this rate would take several months to reach. To go much beyond this level would require Federal

guarantees about future orders in order to induce assembly-line increases. It would probably also reduce our truck productive capacity somewhat.

It's worth noting that our big intercity buses have substantial spare capacity, with average load factors now running about 50%. Maximum average load factors approaching 70% are quite feasible.

AMTRAK, despite sharp recent upsurges in traffic, still has significant spare capacity in all but the peak summer months. For instance, AMTRAK's projections are based on an average annual load factor of 55%.

3. Reduced Speed Limits.

The effect of speed on automobile efficiency is well known. Study after study shows that fuel consumption rises rapidly at speeds beyond about 50 mph. For example, a recent study of the Federal Highway Administration (a copy of which I will submit for the record) of 13 late-model cars showed the following average percent increases in per-mile fuel usage:

- From 30 to 40 mph: No increase.
- From 40 to 50 mph: 8% increase.
- From 50 to 60 mph: 11% increase.
- From 60 to 70 mph: 17% increase.
- From 50 to 70 mph: 31% increase.

These and other data, when shifted to a weighted average basis, enable us to estimate fairly well the impact of alternative National speed limits. This analysis leads us to conclude that a well-observed 50 mph National speed limit by our 100,000,000 automobiles would conserve between 200,000 and 250,000 B/D of gasoline. A 55 mph limit, on the other hand, would conserve only about two-thirds that amount. And a 60 mph limit would, in total, save very little.

The near-term petroleum shortage is severe. A program to save 200,000 B/D or more of gasoline--as would a 50 mph National speed limit--clearly must be given a high priority. It is for this reason that President Nixon has recommended a 50 mph limit. Hopefully, the Nation's refiners will soon be able to convert this unused gasoline into much-needed diesel fuels, jet fuels, heating oils, and residual oils.

One additional point should be recognized in developing the impact of vehicle speed limits. Based on World War II experiences, there is a tendency by many drivers to push each limit by a little bit. Thus, 50 mph would be pushed to say 53 or 54; and a 55 mph limit would be pushed to close to 60. But at 60 the needed fuel saving nearly disappears. Thus, a 50 mph limit becomes the best National guideline.

Over-the-road truck and bus operations pose an entirely different set of issues. For the roughly 1,000,000 large combination trucks and the 25,000 intercity buses the issue of overall productivity is at least as important as fuel usage. A \$30,000 truck that typically averages 60 mph on a 500 mile run will find, if restricted to, say, 50 mph, that its per-ton hauling costs--and, in time, the costs to the shipper--will rise by about 15% (assuming the driver's pay is adjusted to a per-hour rate). In addition, there are also problems of terminal locations, driver hour limitations, and the like.

Fuel efficiency of trucks and buses varies greatly in relation to speed. Some trucks, for example, are geared for more fuel efficiency at higher speeds and some are not. We lack good data and are now in the process of running a number of carefully controlled experiments. It is our current belief that between 50 and 55 mph the fuel efficiencies of trucks and buses, in total, are essentially unchanged. But, as you push to 60 mph--with its increased wind resistance--we believe overall efficiencies decline.

The key point, in our mind, is how to strike the proper balance between the need to conserve fuel by holding down automobile speeds and the necessity to avoid rapid increases in truck and bus operating costs.

Safety considerations are also important. All vehicles are safer at slower speeds and, in fact, the lives saved by slower automobile speeds may be one of the few bright spots in the energy crisis.

Speed differentials, if too pronounced, pose serious safety questions. Although good data are again absent it appears that speed differentials of 10 mph or larger can pose quite serious safety problems. A differential of 5 mph, on the other hand, appears to be a fair balance between the need for truck and bus operating efficiency and the safety considerations relative to the 50 mph rate of automobiles. It is for this combination of reasons that we have recommended a 50 mph limit for automobiles and a 55 mph limit for over-the-road trucks and buses.

4. Priorities for Fuel Allocations to Various Modes of Transportation.

It is the Administration's intention to see that all forms of public and freight transportation receive very high priorities in fuel allocations.

Mass transit, intercity bus, passenger rail, and fuel transport operations are scheduled to receive fuel allocations equal to the full current needs. Other surface freight operations should receive allocations only slightly reduced, if at all, from current needs.

In the very near term, however, there may be local disruptions in the distribution system as we abruptly learn how to deal with this crisis. Such short-term shortages, for example, have just recently created some serious problems for the over-the-road truckers. We believe that we will soon be able to move ahead to deal with these immediate problems.

The air carriers face a different and more serious problem. Because much of their specialized jet fuel has been imported from refineries in other countries, we face our most serious near-term transportation crisis in finding replacements for these lost imports. For the near-term--like December and

January--we have very little ability to divert other petroleum fuels, such as gasoline, into jet fuels. Over a several month period refiners will be able to readjust operations but this will provide little immediate relief. Currently, domestic air carriers are being asked to adjust to a cutback of 15% below 1972 levels by January. Since 1973 was running about 10% over 1972, this is close to a 25% shortfall and is obviously quite severe.

A modest amount of short-term relief may be obtained by shifting some of the air carriers over to a naphtha-based fuel (rather than kerosene based). This fuel requires special handling but is quite satisfactory for commercial usage. Air Canada, for example, now uses it for most of its service. If we are able to make this shift we will add to the gasoline shortage a little, but will, at least, lighten the very heavy burden being felt by the air carriers and their employees. The international air carriers, most of whom use a "bonded" turbine fuel that is no longer available, may be the first to shift to naphtha based jet fuel.

5. Difficulties in Moving Foodstuffs and Other Essential Goods to Market.

Other than very short-term problems resulting from the shift from an "historical" allocation process to an

"end-use" allocation process, as we are now doing, we foresee no serious problems caused by fuel shortages in moving essential products, such as food stuffs, to market. We intend to work very hard to keep serious problems from developing.

6. Other Economic Dislocations.

It is our intention to do all we can to manage this fuel shortage so that it has the least impact on jobs and economic activity. This is the thrust of the President's overall program. Cutbacks must be targeted to the areas where "chain-reaction" effects--as in primary industries--are a minimum. It is, of course, impossible to cope with a sudden 15% or so oil cutback without hurting some sections of the economy and some individuals. But, hopefully, by cutting out the "slack"--the slack in pleasure and other vehicle driving, in overheated houses and offices, in wasteful uses of electricity--we can get through this crisis without serious damage to employment levels and living standards.

Looking ahead, we must, as soon as possible, move forward as a Nation to develop the capacity to free ourselves from future energy blackmail. This, of course, is the goal of the President's "Project Independence."

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And now we will do what we can to answer your questions.

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