ENERGY CONSERVATION AND CONVERSION ACT OF 1975

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HEARINGS

BEFORE THE

COMMITTEE ON FINANCE

UNITED STATES SENATE

NINETY-FOURTH CONGRESS

FIRST SESSION

ON

H.R. 6860

AN ACT TO PROVIDE A COMPREHENSIVE NATIONAL ENERGY CONSERVATION AND CONVERSION PROGRAM

JULY 10, 11, 14, 15, 16, 17, AND 18, 1975

PART 1 OF 2 PARTS

(July 10, 11, and 14, 1975)

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CONTENTS

ADMINISTRATION WITNESSES

PUBLIC WITNESSES

ADDITIONAL INFORMATION

COMMUNICATIONS

ENERGY CONSERVATION AND CONVERSION ACT OF 1975

THURSDAY, JULY 10, 1975

U.S. SENATE,
COMMITTEE ON FINANCE,
Washington, D.C.

The committee met, pursuant to notice, at 9:33 a.m., in room 2221 Dirksen Senate Office Building, Senator Russell B. Long (chairman) presiding.

Present: Senators Long, Talmadge, Ribicoff, Nelson, Gravel, Bentsen, Haskell, Curtis, Hansen, Dole, Packwood, Roth, Jr., and Brock.

The CHAIRMAN. This hearing will come to order.

This morning the committee begins hearings on H.R. 6860, the Energy Conservation and Conversion Act. It is my hope that by the time the Committee on Finance completes action on this bill, it will be a significant step toward dealing with one of our most important domestic problems—assuring an adequate supply of energy to meet our economy's needs. We will welcome the suggestions of witnesses, not only on the specific provisions of the House Bill, but also on any other matter within the Finance Committee's jurisdiction relating to energy production, conversion and conservation.

Our first witness this morning will be Mr. Elliott M. Estes, president and chief operating officer of the General Motors Corp.

Mr. Estes, we are very pleased to welcome you here before the committee, and we look forward to your statement. We would hope that you could limit your statement to 10 minutes and on the first round of questions, I will ask each Senator to confine himself to 7 minutes, hoping that that is sufficient time for all the questions they wish to ask, but if they wish to ask more, they can.

[Statements of Senators Curtis, Dole, and Brock, the committee's press release announcing these hearings, and a copy of the bill, H.R. 6860 follow. Hearing commences on page 119.]

STATEMENT OF SENATOR CARL CURTIS

Mr. Chairman, we are today commencing full committee consideration of the Energy bill passed by the House. I look forward to hearing the witnesses who will come before us to give us the benefit of their views on the energy problem and their suggestions as to how Congress should respond to the problem.

Mr. Chairman, our responsibility is an important one. If we are to reduce our dependence on foreign energy sources, we must greatly expand our production of domestic energy resources. Yet, so far as I can tell, there is no provision in the House bill that will lead to the production of a single barrel of domestic oil. Conservation is important, but it is only a part of the solution.

I look forward to working with you Mr. Chairman, and with my colleagues on the committee, to develop an effective and equitable bill that will start us down the road to energy independence.

STATEMENT OF SENATOR BOB DOLE

Because of the apparent and well-publicized weaknesses in the House-passed version of H.R. 6860, we bear the responsibility of shaping an equitable, responsive energy bill which encourages the conservation of available energy resources *and* provides incentives for the development of new domestic energy supplies. It seems that the House has attempted to give the American people something that simply cannot be given—energy independence at no cost.

But, more importantly, the House bill does absolutely nothing to encourage the development of new domestic supplies of oil and gas. Nowhere does the House bill address the inevitable shortages of natural gas and oil which we will face in the very near future in the absence of positive legislation which provides the economic incentive to step up efforts to find domestic reserves. Instead, the House has settled for a measure which relies heavily on import quotas as a means of self-imposed conservation without, at the same time, providing realistic methods of increasing domestic energy production to take up the economic slack which will certainly develop if new domestic energy sources are not found to replace the lost imported energy.

NO COST-FREE SOLUTION

In fact, the import restrictions in H.R. 6860, which could reduce oil imports by 2 million barrels per day by 1985, could result in a loss to the American economy of as much as $60 billion per year. The Senate budget committee energy task force has estimated that the mandatory reductions in energy consumption which will result if incentives are not provided for increased domestic energy production will lead to a diminution in the Nation's output of goods and services. Specifically, it is estimated that a self-imposed reduction in imports of 1 million barrels per day would save about $3.7 billion per year in payments to foreign energy producers. *But,* such a reduction could cost as much as $30 billion in gross national product, for a net cost of over $26 billion per year to the American economy. True, it is difficult to identify precisely who bears this cost. And therein lies the political appeal of the import quota concept.

I am hopeful that we in the Senate will be able to vastly improve and expand the bill sent to us by the House. We must strengthen the provisions which provide incentives for fuel conservation. We must closely examine the superficial appeal of import quotas in light of their impact on the economy. And we must review carefully the provisions relating to business use of petroleum products in light of economic reality.

ENCOURAGE DOMESTIC ENERGY PRODUCTION

More importantly, we have the opportunity to demonstrate leadership in the drive for energy independence by enacting positive measures to deregulate the artificially-controlled prices of natural gas and old domestic crude oil. It should be painfully obvious to everyone how artificial price regulation affects petroleum production. And if it is not yet obvious, the curtailments of natural gas this winter—estimated as high as 3.3 trillion cubic feet—will make it obvious. For such curtailments may lead to factory shut-downs, increased unemployment and economic hardship.

Domestic production of crude oil is also declining due to artificial price restraints. For that reason, I believe that the increased revenue the industry is getting from high oil prices should be channeled back into the exploration and development of additional domestic oil and gas. The Finance Committee could take the lead in this area by adopting a windfall profits tax with a plowback provision in conjunction with the phased decontrol of natural gas and crude oil prices. Obviously, such decontrol should be phased in gradually over a period of years so that prices to consumers rise slowly, thus avoiding an inflationary shock just as the economy begins to recover from the recession. Moreover, a properly constructed excess profits tax provision will assure that oil producers plow back their increased revenues in the search for new domestic reserves.

Only when we balance decreased imports and conservation with increased domestic production or development of alternative energy sources can we begin to solve this Nation's energy problem. I urge that we balance the numerous energy conservation incentives in H.R. 6860 with incentives for development of domestic reserves. For this is a situation where half a loaf is not necessarily better than no loaf at all.

STATEMENT OF SENATOR BILL BROCK

Mr. Chairman and Members of the Committee, some six months before the Arab oil embargo I warned that:

"In the long run, few alternatives are less attractive than an America dependent for its vital energy upon the caprice of such areas as the Middle East or the Communist bloc. Our national security impels us to extreme caution as we move toward greater dependence on such sources.

"We must never allow ourselves to be placed at the mercy of some volatile monarch who may, under whatever influence, suddenly decide to turn off the lights."

Now, two years and one embargo later, we are at a turning point. The House of Representatives has failed to act decisively and the burden is on us. We can either adopt a tough but evenhanded energy conservation *and development* program, or we can continue to drift, growing more dependent on foreign sources of energy with all the consequences this implies for our economy and our national security.

But before we begin considering legislation, perhaps it would help to take a look at what we've accomplished in the last two years. For maybe we can learn what we should and should not do.

On the face of it at least, there have been many develepments that would appear to have contributed to our long run goal of energy security. A major reorganization of federal energy policymaking was effected. The Federal Energy Administration Act was enacted; the Energy Resources Council and Energy Research and Development Administration were also formed. Last November, the *Project Independence Report* was published.

At the same time, however, there have been many indications that the energy industries are moving away from energy self-sufficiency. There have been many suspensions and cancellations of refinery expansion programs. The total loss of new refinery capacity now exceeds two million barrels per day, and several companies that build and design refineries are now out of work in the United States. Company drilling programs have been curtailed sharply, while the development of oil shale has also been delayed indefinitely, largely because of federal energy policy. Many electric utilities have postponed expansion of their generating capacities, while domestic production of crude oil has fallen since January, partly because of the government's entitlements program.

Perhaps one reason for contrast between what is supposed to be happening in energy policy and what is happening is the confusion created by the repeated reorganization of the federal energy policymaking establishment. One way to appear to solve a problem is to reorganize. Governments, it often seems, measure their success in terms of new organizations created. As one observer has noted: ". . . we tend to meet any new situation by reorganizing; and a wonderful method it can be for creating the illusion of progress while producing confusion, inefficiency, and demoralization." This was said, incidentally, not by Secretary William Simon or Secretary Rogers Morton or Administrator Frank Zarb, but by Gaius Petronius Arbiter, a confidant of Nero Caesar during the First Century A.D.

Of course, we in Congress have gotten to know the different energy czars and their subordinates quite well. For particularly since the embargo, they have had to spend much of their time appearing before Congressional committees. During his tenure time as Administrator of the Federal Energy Office, Secretary Simon reportedly appeared on the Hill at the request of Congress 108 times, an average of more than once per working day. And in the first 135 days of ERDA's existence, witnesses from this agency testified for 109 hours of formal hearings before 6 full committees and 27 subcommittees.

All this wouldn't be so bad if we had been more productive. However, aside from the Alaskan pipeline bill, which was passed about a year and a half ago, not one meaningful piece of energy legislation has emerged since the energy crisis was officially recognized as such. Instead, we have preoccupied ourselves with the search for a scapegoat and with methods of punishing the industry for alleged wrongdoing. We have threatened the oil industry, especially the major oil companies, with price rollbacks, extension of allocation authority, the divesture of holdings in production, pipelines and marketing facilities, and the extension of FPC jurisdiction to the intrastate market for natural gas. None

of these measures will save energy; neither will they encourage the production of energy. In short, Congress has been worse than useless; it has been counter-productive.

But while we have been busy hunting scapegoats and trying to rollback prices, the Administration's record has been dismal as well. The embargo was an excellent time to obtain Congressional approval of such critically important measures as the deregulation of natural gas. Rather than acting, however, the Administration chose to study the issues. And what a fine study emerged. The result of months of work by hundreds of federal bureaucrats, the *Project Independence Report* is a massive document that I'm sure few if any in this Chamber have read.

And even if someone has read it, it raises more questions than it answers. However, the primary failing of the report is not what it says or does not say, but the diversion it has created. The *Report*, like appearing before Congress, has absorbed enormous amounts of time and talent in the Federal government. Perhaps worse, throughout 1974, it provided the Administration with a means of reassuring the public, and themselves, that the goal of self-sufficiency was being advanced when, in fact, it was being studied. Reorganization is one way to create the illusion of progress; studying a matter is another.

While Congress has been scapegoating and the Administration reorganizing and studying, another and far more dangerous aspect of federal energy policy has emerged: the regulatory one. Now, the Federal Energy Administration employs about 3,700 bodies, most of them concerned with administering price and allocation controls. The bureaucracy is rapidly becoming entrenched, with a vested interest in prolonging the controls. And the regulations these bureaucrats write often make little sense. They have also gone far beyond the original intent of the United States Congress. For example, the San Francisco Office of the Federal Energy Administration ruled early this year that no gasoline station could use allocated products to engage in price wars. In other words, FEA is opposed to lower prices for consumers.

Several months ago FEA issued a regulation, without a comment period, requiring parties seeking to establish new stations in a market area to first solicit comments from existing stations (and potential competitors) to assure that their market position will not be eroded. In other words, in the name of protecting competition, FEA is actually opposing competition and, because of this, the interests of the American consumer.

Mr. Chairman, I would like to have included and printed in the Record a policy directive from the San Francisco office of the Federal Energy Administration regarding price cutting and a notice from the Federal Register containing the procedures a businessman must follow to open a new gas station.

The regulatory approach to energy policy has clearly been a failure. It has discouraged domestic production, encouraged imports and created uncertainty and stagnation in the energy industry. It is ironic to me that at the same time that we are questioning the efficacy of government regulation of economic activity in so many areas, we are saddling the energy industry with more and more regulations.

If our fascination with regulations and controls was responsible only for rising consumer prices and increasing inefficiencies in the energy industry, I would be deeply concerned. But the consequences of our present energy policy are much more grave. We are in essence insuring our dependence on insecure foreign sources of oil. What happens if we have another oil embargo slapped on us tomorrow? And even without an embargo, we face the prospect of future increases in oil prices from the OPEC nations with all the consequences that this will have for an already weak domestic economy.

What am I talking about? For one thing, I am talking about the increasing vulnerability of the United States economy to foreign supply disruptions. I shudder at the thought of what such actions could mean.

And I would like to point out another question which I have come to fear more and more. What happens when our freedom to conduct foreign policy is hampered by our ever growing dependence on foreign oil? For example, will we be forced to abandon, or lessen, our support of Israel because of our need for Arab oil? The United States cannot be a great power unless it is independent. Dependence is not freedom.

A year ago, the United States sent $2.2 billion in special military assistance to Israel. We thought it necessary to rebuild Israeli forces to balance the Soviet-supplied Arab forces. What did that do to the balance of power in the Middle

East? Did resupplying Israel force us to start digging ourselves a hole because there is no true balance of power in that region as long as the Middle East has oil dependence to hang over our heads?

Let me present a rather grim scenario. Suppose there is another Middle East war and this time, out of fear of a more devastating embargo, the United States refuses to resupply Israel with the military equipment it needs to survive.

Thoughtful observers have believed for many years that Israel possesses nuclear weapons and has the capacity to deliver them. And when faced with a question of national survival, is there any doubt as to what would occur? In fact, we could see the fulfillment of a Biblical prophecy within our lifetime . . . a nuclear Armageddon in the Middle East—stemming, in part, from the failure and misdirection of U.S. energy policy.

This is a terribly grave matter. We face a precarious time. Decisions need to be made which will allow us to make future decisions in an atmosphere of freedom, not of dependence.

For months, we have talked and listened and argued and gotten nowhere. The Senate now has the opportunity to work toward a national energy policy which allows us our freedom and also allows us the oil necessary to continue with a strong economy. However, a strong economy will not appear by itself as long as Congress continues to believe that all wisdom remains in Washington. Our belief in controls and regulations has put us deeper in that hole which we are digging. We must strive toward energy security, but to achieve that we must realize that the laws of supply and demand are still valid ones and should be given as much of an opportunity as possible, as soon as possible.

Energy is still our future. Policy direction is vitally needed if we are to remain a strong and free nation.

[From the Federal Register—Friday, May 9, 1975]

FEDERAL ENERGY ADMINISTRATION, MOTOR GASOLINE

GUIDELINES FOR EVALUATION OF APPLICATIONS FOR ASSIGNMENT OF SUPPLIER AND BASE PERIOD USE TO NEW GASOLINE RETAIL SALES OUTLETS

The Federal Energy Administration hereby gives notice of guidelines to be used by FEA in evaluating applications for assignment of suppliers and base period uses to new gasoline retail sales outlets. The guidelines are set forth below and will provide a basis for consistent application of FEA's regulatory provisions with respect to new retail sales outlets of motor gasoline.

May 6, 1975, Washington, D.C.

ERIC J. FYGI,
Acting General Counsel.

APPENDIX

GUIDELINES FOR EVALUATION OF APPLICATIONS FOR ASSIGNMENT OF SUPPLIER AND BASE PERIOD USE TO NEW GASOLINE RETAIL SALES OUTLETS

1. *Scope.* Numerous questions have been raised as to the procedures and substantive criteria which FEA should apply to applications for assignment of suppliers and base period use for new gasoline retail sales outlets. These guidelines are intended to provide guidance as to how such applications should be handled both procedurally and substantively under current FEA regulations. In particular, these guidelines will discuss the identification of and service of notice to possible aggrieved parties as required by 10 CFR § 205.33 and the evaluation of applications to determine whether to assign a supplier and, if so, how to determine the assigned base period use pursuant to 10 CFR §§ 205.34 and 211.12(e).

2. *Notice to Aggrieved Parties.* (a) *General.* The procedural regulations and criteria applicable to all applications for assignment of suppliers and base period use are set-out in Subpart C of Part 205. Section 205.34 requires that the applicant file an application which not only contains various facts regarding the request, but also the "names and addresses of all affected persons (if reasonably ascertainable)," and "[t]he identification of any persons who will be aggrieved by the FEA action sought, including potential suppliers."

Section 205.33(a) provides that FEA *shall* serve notice on any person readily identifiable by the FEA as one who will be aggrieved by the FEA action and

may serve notice on any other person that written comments will be accepted if filed within 10 days of service of the notice. . . . (Emphasis added.)

The word "aggrieved" is defined in § 205.2 as describing or meaning "a person with an interest sought to be protected under the FEAA or EPAA who is adversely affected by an order of interpretation issued by the FEA or a State Office."

Thus it is the responsibility of the applicant under § 205.34(b) to supply FEA with a list of potentially aggrieved persons, but the burden is on FEA under § 20533(a) to serve notice of the application on such aggrieved parties. Moreover, FEA "may serve notice on any person. . . . (Emphasis added.)

(b) *Identification of Aggrieved Parties.* The applicant's task of identifying potentially aggrieved persons is not as difficult as it might seem. In most cases this information is known to the applicant because suppliers opening new sites often have made sophisticated studies of the size of the trading area and the competitors located within it before their application is submitted. As a general rule, in the case of a new station located in a typical residential neighborhood, all retail sales outlets, particularly small and independent refiner-operated outlets and all branded and non-branded independent marketer-operated outlets, located within a mile radius of that station should be presumed to be "aggrieved persons" within the meaning of the notice requirements. The geographical trading area affected might be somewhat larger in rural neighborhoods and somewhat smaller in urban neighborhoods. Moreover, because of the peculiarities of traffic flow, an affected trading area might be longer in one direction than another. But, even though it is not possible to prescribe rigid rules for the determination of the perimeters of the trading area, in most cases the FEA's discretion in this area should be freely exercised so long as the general rule of erring on the side of over-inclusion is followed.

It is not necessary that notice be served on other persons also identified by the applicant but not located in the trading area of the proposed new station—even though they might otherwise be affected because their supplies might be reduced—since the administrative burdens of doing so greatly outweigh the minimal effect which comments received from such persons would have on the decision.

(c) *Method of Providing Notice.* Notice should be individually served upon any person identified by the applicant as an aggrieved party and located in the trading area of the proposed new station using the form of notice provided in Attachment A. In addition, FEA should arrange, using imprest funds, for the publication of a notice in local newspapers of general circulation in the market area to be served by the proposed retail sales outlet. The notice should also be substantially in the form of Attachment A to these guidelines and should be published on at least two separate occasions at least one week apart. This procedure should serve to provide notice to those persons not readily identified by the applicant as aggrieved persons and satisfies FEA's independent responsibility to identify and notify aggrieved persons.

(d) *Information in Notice.* It is not necessary to disclose in the notice any of the information contained in the application except (i) the applicant's name and address, (ii) the location of the station for which application is made, and (iii) an approximation of the base period use sought by the applicant. Only an approximation of the amount being applied for should be given because in some cases applicants have claimed that the actual amount is proprietary information arrived at after a thorough and highly confidential marketing survey of the area, the disclosure of which would inform the applicant's competitors of the applicant's strategy of market expansion. While such information may not in fact be the type of proprietary information protected from disclosure, there is at least a colorable argument that it is. In any event, the problem can be readily avoided by providing in the notice only an approximation of the actual amount. For example, if the amount applied for is 1,000,000 gallons per year. It could be described as "a high volume station having an aggregate base period use in excess of 800,000 gallons per year." Such a description would give potentially aggrieved parties adequate notice of the relative size of the station and at the same time avoid the unnecessary disclosure of possibly confidential competitive information.

(e) *Comment Period, Hearings and Conferences.* Subpart C of Part 205 requires FEA to give aggrieved parties 10 days from service of the notice in which to file written comments. FEA may also make an independent investigation of facts alleged in the application of comments and may rely on information obtained from any source. (*See* § 205.35.) A conference and hearing are both discretionary with the agency. (*See* § 205.35 and Subpart M of Part 205.) A conference with

only the applicant in attendance is the recommended means of obtaining additional information if the application and the written comments still leave some unresolved issues. A hearing should be used only rarely and in exceptional circumstances, since most of the information relevant to the application can best be conveyed only in writing.

(f) *Timeliness of FEA Action and Interim Supplies.* FEA is required to act upon an application for assignment of a specified supplier within 90 days after its receipt. Failure to act during such period may be considered by the applicant as a denial from which an appear may be taken. (*See* § 205.37.)

It is sometimes difficult, however, to evaluate an application properly within the 90-day period. Moreover, the applicant may need prompt action because the station is idle, perhaps at great expense to the applicant. In such cases it is possible for FEA office to issue an order granting a temporary assignment until such time as a full evaluation of the application for a permanent assignment can be completed. (See also discussion below concerning retail sales outlets which operate using surplus products.) The procedures for issuing such temporary orders are found in § 205.39.

As indicated in that section, a temporary assignment can be made "upon application." This does not mean that the applicant must expressly apply for a temporary as well as a permanent assignment. Since an application for a temporary assignment need contain no more information than that required for a permanent assignment, the filing of two applications is unnecessary. Thus, when an application for a permanent assignment has been made and it is apparent from the circumstances that a temporary assignment is warranted pending a final decision and is not objected to by the applicant, the application on file for a permanent assignment may be treated as an application for temporary assignment as well as for a permanent assignment.

An order granting a temporary assignment can be effective for only 60 days and cannot be renewed. The temporary order must contain an express finding that circumstances do not permit issuance of an assignment or phase with the usual processing of permanent assignment orders. *See* § 205.39(b).

3. *Substantive Criteria Applicable to Assignment of Supplier and Base Period Use.* (a) *General.* The procedural regulations set forth in § 205.35(b) the criteria applicable to the evaluation of applications for assignment of a supplier and new base period use. These criteria restate the criteria set forth in section 4(b)(1) of the Emergency Petroleum Allocation Act of 1973 applicable to FEA's overall duties in promulgating and applying the Mandatory Petroleum Allocation and Price Regulations.

Like the criteria of section 4(b)(1) of the EPAA, the various, criteria of § 205.35(b) are to be applied only "to the maximum extent possible." As applied to a particular set of circumstances, these criteria may not only be difficult to apply but also conflicting. As the courts have said in applying the various goals of section 4(b)(1), [t]he goals are inherently inconsistent, and no regulation could promote all of them at the same time. Congress recognized this in saying that the regulations shall provide for them 'to the maximum extent practicable.' A balancing of goals is required, and Congress has left the details of this balancing to the Federal Energy Administration. *Union Oil Co.* v. *FEA*, ——— F. Supp. ———, Fed. Energy Guidelines ¶ 26,007, at p. 26,098 (C.D. Cal. 1974); *see also Air Trans. Ass'n of America* v. *FEA*, 382 F. Supp. 437 (D.C. 1974). Thus, FEA should be guided by the criteria of § 205.35(b) but has considerable discretion in balancing one against the other.

While it is inappropriate to prescribe precise rules for the application of these criteria to assignments of suppliers and establishment of new base period uses in all circumstances, nevertheless some general principles may be prescribed.

(b) *Whether to Assign a Supplier/Purchaser Relationship.*

Three of the criteria which must be taken into account in deciding whether to assign the new outlet a supplier are whether granting the application in question would promote "economic efficiency;" minimize "economic distortion, inflexibility, and unnecessary interference with market mechanisms," and promote the equitable distribution of petroleum products at equitable prices among all regions of the country and segments of the industry. (*See* § 205.35(b)(1)(viii), (ix), and (vi).) These three criteria together can be read as stating that even within the context of the regulatory program, free market forces should be allowed to function to the extent possible. Thus, in the absence of other countervailing considerations, FEA should start with a strong but rebuttable presump-

tion in favor of assigning a supplier/purchaser relationship for a proposed new retail sales outlet. In particular cases there might also be other relevant criteria favoring the application, such as the maintenance of public services and agricultural operations. (*See* § 205.35(1) (ii) and (iii).)

A possible countervailing consideration may be the preservation of a competitively viable independent section of the industry.

Thus, in each case the facts must be reviewed to determine whether the general presumption in favor of granting the application should be overriden or sustained by a weighing of these other countervailing considerations.

(i) *Effect on Supplier's Other Purchasers.* Attention should be paid to the effect of any assignment upon the supplier's other customers, particularly the supplier's branded and non-branded independent purchasers. If the assignment will significantly lower the supplier's allocation fraction below one (1.0) then the assignment should be questioned. In general, if the assignment can be expected to reduce the supplier's most recently reported allocation fraction by more than one percentage point (0.010), the reduction may be significant and would warrant especially careful assessment of the supplier's future supply position.

(ii) *Effect on Independent Competitors.* In evaluating applications, the comments solicited from independent and small refiners and branded and non-branded independent marketers operating stations within the same trading area as any new station which will not be operated by an independent marketer or small or independent refiner should be carefully reviewed to determine whether or not granting of the application may seriously jeopardize the competitive viability of small and independent refiners and branded and non-branded independent marketers.

The existence of substantial evidence that granting the application would result in probable severe and irreversible damage to the existing independent segment in the proposed market may be the basis for denial of an application. Such evidence would not consist of a showing of probable financial impairment to a particular independent marketer, but rather would require evidence that the volume of business enjoyed by the independent segment in that marketplace would probably be substantially and permanently reduced.

Although these judgments are extremely difficult to make, FEA cannot ignore clear and compelling evidence that the operation of a new retail sales outlet which is not operated by an independent marketer will so dominate a trading area as to substantially impair the competitive viability of independent marketers. Generally such evidence is not present if: (1) independent marketers in the trading area can remain competitively viable by relying upon customers who will patronize such stations because of the availability of supplementary products and services not provided by the new station; (2) there are other large volume/low profit margin stations in the trading area or in other nearby trading areas, and the presence of such stations has not impaired the competitive viability of independent marketers;[1] and (3) there is a reasonable prospect of considerable growth in demand within the trading area so that the new station, notwithstanding its advantages, will not necessarily acquire most of its business at the expense of the other stations in the area.

This is not meant to be an exhaustive listing of the kinds of evidence that would sustain the granting of such an application notwithstanding a showing of adverse impact upon the various aggrieved parties. Indeed, given the rebuttable presumption in favor of granting such applications in any event, the burden is on those opposing the application to make a clear and convincing showing that the competitive viability of the independent marketing sector within the trading area will be substantially impaired by the opening of a new station which is not to be operated by an independent marketer. This showing is not made merely by a showing of financial harm to, or even of impending bankruptcy by, one or more independent marketers. Finally, such a showing cannot rest upon unsubstantiated assertions or mere speculation. There must be evidence of the specific adverse impacts of the new station's opening before FEA can perform the analysis outlined above and conclude that the application must be denied.

(iii) *Consideration of Applications for Retail Sales Outlets to be Built in the Future.* FEA has encouraged operators of potentially new retail sales outlets to

[1] The FEA must consider, however, whether, given limited demand within the trading area (see item (3) following), the new station, in conjunction with the existing high-volume station, will destroy the competitive viability of the remaining independent marketers.

apply for FEA assignment of a supplier/purchaser relationship and a base period use prior to construction of the new outlet. (*See* § 211.12(e).) This policy was established to prevent any hardship which might result from a failure to obtain an assigned supplier or base period use following the operator's expenditure of construction funds and assumption of other obligations connected with the proposed new retail sales outlet. Consequently, consideration of an application should not be delayed because a retail sales outlet is not currently operational or may not become operational before the expiration date of the EPAA. Approvals of such applications may be conditioned upon the retail sales outlets being operational within a certain period of time. Of course, such assignments should be made effective only upon the retail sales outlet's becoming operational.

(iv) *New Retail Sales Outlets Operating Solely on Supplies of Surplus Product.* In some cases new retail sales outlets are being operated with gasoline purchased from suppliers which have certified their gasoline to be surplus product as permitted by § 211.10(g). Such retail sales outlets, however, are new suppliers as defined by § 211.10(e) which must receive FEA approval before they commence operations. Such approval should ordinarily be freely granted to gasoline retail sales outlets provided it is made clear that such approvals do not create a supplier/purchaser relationship between the retail sales outlet and the supplier of the surplus product and does not establish a base period use for the retail sales outlet. Approvals pursuant to § 211.10(e)(2) need not be conditioned upon application for a supplier and an assigned base period use. Operators of new retail sales outlets under § 211.10(e)(2) should understand, however, that unless they have been assigned a supplier and a base period use pursuant to § 211.12(e), they have no future claim to a supplier or a pro rata share of available supplies in a period when there is no surplus product.

(e) *Assignment of Base Period Use.* Once a decision to assign a supplier/purchaser relationship for a new retail sales outlet is made, FEA must determine the appropriate base period use to be assigned the retail sales outlet. As a general rule, the average base period use for retail sales outlets of a similar size (number of pumps) and nature (full service, gas only, self service, car wash, etc.) in the same market area will be the appropriate assigned base period use. Thus, for example, a station of a particular size and type should receive a base period use approximately equal to other stations of the same kind in the market area. When a new type of station is constructed in a market area, it should receive an allocation commensurate with the relative treatment of the new type of station compared to existing types in the nearest market area where such comparisons may be made.

The delineation of the market area will vary in each case, and ultimately will be determined by FEA. There can be no hard and fast criteria, but some general guidelines may be observed.

(i) In a city over 25,000 population, the market area to be considered should be the area within a one-mile radius of the proposed new outlet.

(ii) In a suburban area (housing developments, shopping centers, apartments) the market area to be considered should be the area within a two-to-three mile radius of the proposed new outlet, depending upon the density of recent growth and traffic pattern characteristics in the area.

(iii) On a non-urban arterial highway with full control of access, the market area should include the area within one-fourth mile of the access point at the proposed location of the new outlet and the next two access points in each direction from the proposed location of the new outlet.

(iv) On a non-urban arterial highway with uncontrolled access or partially controlled access, the market area should include five miles in either direction along the highway.

(v) On a through street or through highway in a rural area, the market area should be that area within a five mile radius of the proposed new outlet.

(vi) In a town under 25,000 population, the market area should be a two mile radius from the proposed outlet.

As used in the above guidelines, the following terms have the following meanings:

"Arterial highway" means a highway primarily for through traffic, usually on a continuous route.

"Full control of access" means that the authority to control access is exercised to give preference to through traffic by providing access connections with selected public roads only and by prohibiting crossings at grade or direct private driveway connections.

"Partially controlled access" means that the authority to controll access is exercised to give preference to through traffic to a degree that, in addition to access connections with selected public roads, there may be some crossings at grade and some private driveway connections.

"Through street or through highway" means every highway or portion thereof at the entrance to which vehicular traffic from intersecting highways is required by law to stop or yield before entering or crossing and where appropriate signs are erected as provided by law unless entry or crossing is made on the proper indication of traffic control.

"Uncontrolled access" means that the authority having jurisdiction over a highway, street, or road, does not limit the number of points of ingress or egress, except through the exercise of control over the placement and the geometrics of connections as necessary for the safety of the travelling public.

ATTACHMENT A

NOTICE

Pursuant to 10 CFR § 205.83(a), this is to notify you that _____ has applied to the Federal Energy Administration for an order assigning to it a base period volume of [more than] [less than] _____ gallons per month for a retail gasoline station it intends to operate at _____. This retail station will be owned by _____ and operated by _____.

You are invited to submit written comments to FEA in support of or in opposition to the application. If you oppose the application on the ground that approval of it would adversely affect your business, you should set forth in detail the following minimum information:

1. Your name and address.
2. The person or persons who have an ownership interest in the business which you allege would be adversely affected, and the extent of each such person's ownership interest.
3. The location of your business in relation to the retail station for which the application for assignment was made.
4. The person or company from whom you presently purchase gasoline, and whether your business operates under the trademark of your supplier.
5. The volume, in gallons, of gasoline sold by your business in each month from January 1, 1972 until the present.
6. Whether or not there is a demand for gasoline in the trading area in which your business is located which cannot be met by existing retail stations.
7. The adverse effect which you believe approval of the application would have on your business.
8. Detailed factual data and information which support your claim that approval of the application will have an adverse effect on your business. Such data and information should include, at a minimum, audited or unaudited balance sheets and profit and loss statements for a recent, representative time period.

FEA can consider alleged adverse effects on your business only if such allegations are supported by the best available data. Broad and unsubstantiated allegations of adverse impact will be disregarded.

FEA will consider your written comments along with those submitted by the applicant and other interested persons. If you submit written comments, you will be notified of FEA's decision. FEA may, at its discretion, hold a public hearing to consider the application, in which event you will be notified. A copy of that portion of FEA's procedural regulations applicable to these proceedings is enclosed for your information.

Your written comments should be hand delivered or received by mail not later than _____ to the following address:

Unless you claim confidential treatment for your submission, a copy of your comments should be delivered to the applicant. If you want the FEA to treat as confidential the information which you submit to it, it will do so if you so request and if the information is of a type entitled to such confidential treatment under the Freedom of Information Act, 5 U.S.C. 552, as amended, 18 U.S.C. 1905, 10 CFR 205.9, or under other Federal statutes, regulations or rules. Trade secrets and certain commercial and financial information are entitled to confidential treatment if you so request. If you request confidential treatment, you should designate on the original version of your written comments the information which you wish to be kept confidential and submit to FEA and the applicant another version of the document with such confidential information deleted. Information

which is not designated as confidential or is not entitled by law or regulation to confidential treatment will be disclosed to the applicant and perhaps to other interested persons.

Sincerely,

(Name and Title)

Enclosure.

[FR Doc.75-12273 Filed 5-6-75; 1:07 pm]

FEDERAL ENERGY ADMINISTRATION,
San Francisco, Calif., November 26, 1974.

POLICY NOTICE, PROGRAM PARTICIPANTS AND FEA STAFF

This Notice Transmits: Policy for the reporting and investigating gas wars as an indication of supply imbalances within Region IX.

Purpose: For several months, there has been an abundant supply of motor gasoline in most areas of Region IX, although some areas and sectors of the market continue to report shortages. There have lately been vague, unconfirmed reports that supply in some areas is so excessive as to precipitate gasoline price wars. The Regional Office believes that any situations of this sort are an indication that product may be poorly distributed. (Section 211.13(f) of the Mandatory Petroleum Allocations Regulations requires that any purchaser (including retail outlets) whose needs decline, shall apply to his supplier for a downward adjustment to base period use.) Hence, it is not the intention of FEA that larger allocations be used for engaging in gas wars. The regulations prohibit suppliers from increasing volumes to a station in order to support gas war activity.

This Policy Notice rescinds: First notice on this subject.

WILLIAM C. ARNTZ,
Regional Administrator.

POLICY FOR REPORTING AND INVESTIGATING GAS WARS AS AN INDICATION OF SUPPLY IMBALANCES WITHIN REGION IX

PROCEDURES

1. Reporting of gas wars:

A. All FEA employees are to report any "gas wars" they are aware of, giving names, addresses and specific activity (such as gas war signs, low prices being charged, etc.) to the Director, Compliance and Enforcement Division.

B. Complaints from public will be accepted by FEA provided the details listed in 1A are given. Initial contact may be made by telephone to the local FEA office but should be followed up by a brief summary in writing to the Director, Compliance and Enforcement Division, 111 Pine Street, San Francisco, California 94111.

2. FEA Region IX will review all reports and will investigate those determined to have merit. The investigation will determine if the stations involved are being allocated product by their suppliers in accordance with the regulations.

3. If FEA determines that violations of the Regulations have occurred, enforcement action will be taken.

4. If FEA determines that there is an excess of product in the area involved, action will be taken under Section 211.14 of the Regulations to redirect the excess product into areas still experiencing shortages.

PRESS RELEASE

FOR IMMEDIATE RELEASE
June 24, 1975

COMMITTEE ON FINANCE
UNITED STATES SENATE
2227 Dirksen Senate Office Bldg.

FINANCE COMMITTEE SETS HEARINGS ON
ENERGY CONSERVATION AND CONVERSION ACT (H.R. 6860)

The Honorable Russell B. Long (D., La.), Chairman of the Senate Committee on Finance, announced today that the Committee would hold hearings on the Energy Conservation and Conversion Act (H.R. 6860), a bill passed by the House on June 19, 1975.

The hearings will begin on Thursday, July 10, 1975 at 10:00 a.m., and will be held in Room 2221, Dirksen Senate Office Building. On Monday, July 14, at 10:00 a.m., the Committee will hear testimony from the Honorable William E. Simon, Secretary of the Treasury and the Honorable Frank G. Zarb, Administrator, Federal Energy Office, who will present the Administration's position on the legislation.

The House-passed bill would impose import quotas and tariffs on petroleum, would set automobile efficiency standards, would establish a trust fund for energy research and development, and would levy taxes on certain business uses of oil and gas. The Chairman stated that the Committee would welcome witnesses to testify not only on the specific provisions included in H.R. 6860, but also on other proposals within the Finance Committee's jurisdiction relating to energy production, conversion, and conservation.

Requests to Testify.--Senator Long advised that witnesses desiring to testify during this hearing must make their request to testify to Michael Stern, Staff Director, Committee on Finance, 2227 Dirksen Senate Office Building, Washington, D.C. 20510, not later than Thursday, July 3, 1975. Witnesses will be notified as soon as possible after this cutoff date as to when they are scheduled to appear. Once the witness has been advised of the date of his appearance, it will not be possible for this date to be changed. If for some reason the witness is unable to appear on the date scheduled, he may file a written statement for the record of the hearing in lieu of a personal appearance.

Consolidated Testimony.--Senator Long also stated that the Committee urges all witnesses who have a common position or with the same general interest to consolidate their testimony and designate a single spokesman to present their common viewpoint orally to the Committee. This procedure will enable the Committee to receive a wider expression of views than it might otherwise obtain. Senator Long urged very strongly that all witnesses exert a maximum effort, taking into account the limited advance notice, to consolidate and coordinate their statements.

Legislative Reorganization Act.--In this respect, he observed that the Legislative Reorganization Act of 1946, as amended, requires all witnesses appearing before the Committees of Congress "to file in advance written statements of their proposed testimony, and to limit their oral presentations to brief summaries of their argument."

Senator Long stated that in light of this statute and in view of the large number of witnesses who desire to appear before the Committee in the limited time available for the hearing, all witnesses who are scheduled to testify must comply with the following rules:

(1) A copy of the statement must be filed by the close of business the day before the witness is scheduled to appear.

(2) All witnesses must include with their written statement a summary of the principal points included in the statement.

(3) The written statements must be typed on letter-size paper (not legal size) and at least 50 copies must be submitted before the beginning of the hearing.

(4) Witnesses are not to read their written statements to the Committee, but are to confine their ten-minute oral presentations to a summary of the points included in the statement.

(5) Not more than ten minutes will be allowed for the oral summary. Witnesses who fail to comply with these rules will forfeit their privilege to testify.

Written Statements.--Witnesses who are not scheduled for oral presentation, and others who desire to present their views to the Committee, are urged to prepare a written statement for submission and inclusion in the printed record of the hearings. These written statements should be submitted to Michael Stern, Staff Director, Committee on Finance, Room 2227 Dirksen Senate Office Building not later than July 18, 1975.

PR #27

55-583 (Pt. 1) O - 75 - 2

94TH CONGRESS
1ST SESSION

H. R. 6860

IN THE SENATE OF THE UNITED STATES

JUNE 23 (legislative day, JUNE 6), 1975

Read twice and referred to the Committee on Finance

AN ACT

To provide a comprehensive national energy conservation and conversion program.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Energy Conservation and Conversion Act of 1975".

SEC. 2. TABLE OF CONTENTS.

SEC. 3. AMENDMENT OF 1954 CODE.

Except as otherwise expressly provided, whenever in this Act an amendment or repeal is expressed in terms of an amendment to, or repeal of, a section or other provision, the reference shall be considered to be made to a section or other provision of the Internal Revenue Code of 1954.

TITLE I—IMPORT TREATMENT OF OIL

SEC. 101. STATEMENT OF PURPOSE.

The purpose of this title is—

(1) to reduce the dependence of the United States on foreign oil by imposing restrictions on imports of oil so as to reduce such imports as rapidly as practicable without contributing to serious economic dislocation,

(2) to decrease imports of oil so that not later

than 1985 the amount of such imports should not exceed 25 percent of the amount of domestic oil consumption, and

(3) to place the United States, as soon as practicable, in a position to deal with any oil embargo by foreign nations through a combination of any strategic reserve for oil which may be provided by law, other available sources of oil, and economies in the domestic consumption of oil which may be effectuated.

The purpose of this title is to be certain that oil conservation which is obtained under this Act results in the reduction of oil imports and not in the reduction of domestic oil production.

PART I—QUOTAS

SEC. 111. IMPOSITION OF QUANTITATIVE RESTRICTIONS.

(a) QUANTITATIVE RESTRICTIONS.—Except as otherwise provided in this section, the maximum average daily quantity of petroleum and petroleum products which may be imported into the United States shall be determined in accordance with the following table:

Calendar year:	Maximum average daily number of barrels (in millions)
1975	6.0
1976	6.0
1977	6.5
1978	6.0
1979	6.0
1980 and thereafter	6.5

In the case of the calendar year 1975, this subsection shall apply only with respect to articles entered or withdrawn from warehouse for consumption on or after the first day on which the import licensing system established under section 112 takes effect.

(b) AUTHORITY TO VARY SCHEDULE.—

(1) IN GENERAL.—Whenever the President determines that, by reason of variations in domestic consumption caused by economic factors or the weather, by reason of delays in obtaining domestic production of oil or in achieving oil conservation goals, or by reason of other similar factors, it is in the national interest to vary the average daily quantity of oil which may be imported during any period, he shall appropriately modify the figure set forth in subsection (a) applicable to such period.

(2) LIMITATION.—Any modification under this subsection for any period may not change the maximum average daily number of barrels of petroleum and petroleum products which may be imported into the United States during any calendar year to a quantity which is above or below the figure for such calendar year set forth in subsection (a) by more than—

(A) in the case of 1975, 1976, or 1977, 1,000,000 barrels a day,

(B) in the case of 1978 or 1979, 1,500,000 barrels a day, or

(C) in the case of a calendar year after 1979, 2,000,000 barrels a day.

(c) SAVINGS IN DOMESTIC CONSUMPTION TO BE REFLECTED IN REDUCTIONS IN IMPORTS.—The President shall establish quantitative restrictions lower than the quantitative restrictions set forth in subsection (a) to the extent necessary to ensure that savings in United States consumption of oil will be fully reflected by at least equivalent reductions in the imports of oil.

(d) PETROCHEMICAL FEEDSTOCKS.—For purposes of the quantitative restrictions imposed pursuant to this section, petrochemical feedstocks shall not be counted against the maximum average daily number of barrels of petroleum and petroleum products which may be imported into the United States.

(e) NEEDS OF GEOGRAPHICAL AREAS AND INDUSTRIES FOR PARTICULAR PRODUCTS TO BE TAKEN INTO ACCOUNT.—The President shall divide any quantitative restrictions imposed pursuant to this section for any period among petroleum and petroleum products where such division is necessary to avoid substantial adverse impact on the

various economic and health needs of geographical areas and industries within the United States.

(f) CERTAIN DISTILLATE AND RESIDUAL FUEL OILS IMPORTED FOR USE AS FUEL.—

(1) MINIMUM QUANTITIES IMPORTED BEFORE 1978.—Nothing in this section shall prevent the importation into the United States for use as fuel (other than for the propulsion of motor vehicles) of distillate fuel oil and residual fuel oil (provided for in item 475.05 or 475.10 of the Tariff Schedules of the United States) in average daily quantities which are equal to 2,000,000 barrels per day in the years 1975, 1976, and 1977, of which not more than 400,000 barrels per day in any such year may be for such distillate fuel oil.

(2) COORDINATION WITH SUBSECTION (a).—Any quantities of distillate fuel oil and residual fuel oil referred to in paragraph (1) which are imported into the United States during any calendar year before 1978 and which are not greater than the applicable minimum quantities set forth in paragraph (1) shall be charged against the quantitative restrictions set forth in subsection (a) which apply for such year.

(g) APPLICATION OF QUANTITATIVE RESTRICTIONS.—No quantitative restriction imposed pursuant to this section shall apply with respect to any quantity of oil which is

imported into the United States during any period for storage in any strategic reserve for oil which may be provided by law.

(h) QUARTERLY REVIEW OF QUANTITATIVE RESTRICTIONS.—Not less frequently than once each calendar quarter, the President shall review the quantitative restrictions established by subsection (a) and any modifications made pursuant to subsections (b) and (c).

(i) PROCLAIMING OF QUANTITATIVE RESTRICTIONS; CERTIFICATIONS.—

(1) QUARTERLY PROCLAMATION OF QUANTITATIVE RESTRICTIONS.—Before the beginning of each calendar quarter, the President shall proclaim the aggregate quantities of petroleum and petroleum products which under subsection (a) may be imported into the United States during such calendar quarter (as modified pursuant to subsections (b) and (c)).

(2) CERTIFICATION.—The President shall certify any modification made under subsection (b) or (c) to the Secretary of the Treasury and to the Deputy Administrator for Petroleum Import Licensing.

(j) ADMINISTRATION.—The Secretary of the Treasury shall take such actions under the customs laws of the United States as may be necessary and appropriate to ensure that the aggregate quantities of oil imported into the United

States during any period do not exceed the quantities established by subsection (a) as modified pursuant to subsections (b) and (c).

SEC. 112. ESTABLISHMENT OF IMPORT LICENSING SYSTEM.

(a) IN GENERAL.—Before December 31, 1975, the President shall establish an import licensing system for petroleum and petroleum products which are imported into the United States. Import licenses issued under this subsection shall be distributed on the basis of public auctions in which bidding is by sealed bids, and such licenses shall be fully marketable.

(b) SEPARATE LICENSES FOR SMALL REFINERS AND INDEPENDENT MARKETERS.—

(1) ESTABLISHMENT OF SEPARATE LICENSING SYSTEM.—

(A) The President shall establish a separate import licensing system for small refiners and independent marketers of petroleum or petroleum products. Except as provided in subparagraph (B), import licenses issued under this subsection shall be distributed on the basis of public auctions in which bidding is by sealed bids. Import licenses issued under this subsection shall not be marketable; except that, under the circumstances and to the ex-

tent provided by regulations, they may be resold to the Deputy Administrator for Petroleum Import Licensing.

(B) In any case in which any small refiner or independent marketer establishes to the satisfaction of the Deputy Administrator for Petroleum Import Licensing—

(i) that he has made reasonable efforts to secure the import licenses necessary to carry out his business at its regular level of operation but has not been able to secure such licenses, or

(ii) that the destruction of, or damage to, any of his business facilities or any other emergency situation requires that he be issued import licenses in order to continue his business operation,

the Deputy Administrator may issue one or more import licenses to such refiner or marketer. The price for import licenses issued under this subparagraph shall be the average price for import licenses established at public auctions conducted pursuant to subsection (a).

(2) SMALL REFINER AND INDEPENDENT MARKETER DEFINED.—For purposes of this section—

(A) SMALL REFINER.—The term "small

refiner" means a refiner whose total refinery capacity (including the refinery capacity of any person who controls, is controlled by, or is under common control with such refiner) does not exceed 50,000 barrels per day.

(B) INDEPENDENT MARKETER.—The term "independent marketer" means a person who is engaged in the marketing or distributing of refined petroleum products, but who (i) is not a refiner, and (ii) is not a person who controls, is controlled by, is under common control with, or is affiliated with a refiner (other than by means of a supply contract).

(c) PROCEDURES FOR LICENSING SYSTEM.—

(1) IN GENERAL.—The Administrator of the Federal Energy Administration shall establish procedures for the administration of this section through the promulgation of regulations.

(2) REGULATIONS FOR SUBSECTIONS (a) AND (b).—The regulations promulgated under this section with respect to subsections (a) and (b) shall include provisions authorizing the Deputy Administrator for Petroleum Import Licensing—

(A) to schedule frequent auctions during each calendar quarter;

(B) to require that the bidding be for small units, but to permit persons to bid for a number of units;

(C) to establish a maximum limit on the number of units which may be acquired by related persons during any period;

(D) to establish a time limit on the period during which the rights under any import license may be exercised;

(E) to reject bids—

(i) where there is evidence of collusion as to the bidding or as to failure to bid, or

(ii) where such bids are substantially below the market price which exists for the resale of import license;

(F) to deal with identical high bids for any unit by rejecting all bids, by awarding the unit to the high bidder who has acquired fewer units during a specified period than any other high bidder, or otherwise; and

(G) to bar from acquiring or using import license issued pursuant to subsection (a) or (b) persons convicted of committing any felony or misdemeanor under the laws of the United States governing oil imports, oil allocations, or price controls

on oil, and to provide procedures for removing such bar in appropriate cases.

(3) ADDITIONAL REGULATIONS FOR SUBSECTION (b).—In addition to the regulations referred to in paragraph (2), the regulations promulgated under this section shall include provisions—

(A) to ensure that small refiners and independent marketers applying for import licenses under subsection (b) are bona fide refiners or bona fide marketers who have established distribution channels, and

(B) to limit import licenses under subsection (b) to such additional amounts of petroleum or any petroleum product as may be necessary to ensure that—

(i) any small refiner can operate his refineries at capacity; and

(ii) any independent marketer can adequately supply his regular distribution channels.

(d) PRESIDENT MAY REQUIRE USER OF IMPORT LICENSES TO REPORT COUNTRY OF ORIGIN.—If the President finds such action to be necessary or appropriate to the national interest, the President may require each person importing petroleum or a petroleum product into the United States under an import license issued pursuant to this section

to report to the Deputy Administrator for Petroleum Import Licensing the foreign country of which such petroleum or petroleum product is a product.

(e) REFINERS LOCATED IN THE POSSESSIONS, ETC.—The President shall take such steps as may be necessary to ensure that refineries located in the territories and possessions of the United States and foreign trade zones of the United States will participate in all appropriate aspects of the provisions of this title upon terms not less favorable than those accorded to refineries and importers of petroleum products located in the customs territory of the United States. Nothing in this subsection shall be treated as removing any quantitative restriction or duty imposed by or pursuant to this title.

PART II—DUTIES

SEC. 121. RATES OF DUTY ON OIL.

(a) STATUTORY RATES OF DUTY.—Effective with respect to articles entered or withdrawn from warehouse for consumption on or after the 60th day after the date of the enactment of this Act—

(1) the rate of duty with respect to petroleum shall be 2 percent ad valorem; and

(2) the rate of duty with respect to any petroleum product described in section 133 (a) (3) shall be 5 percent ad valorem.

Such rates of duty shall replace the rates of duty heretofore provided by, or pursuant to, law.

(b) AUTHORITY TO ADJUST RATES OF DUTY.—Subject to the limitations set forth in subsections (c) and (d), the President may make, from time to time, such adjustments in the rates of duty established by subsection (a), and in the rates of duty resulting from adjustment under this subsection, as he finds are necessary to carry out the purposes of this Act in the light of overall considerations of the national interest; except that the President may not make any adjustment under this subsection before the close of the 2-year period beginning on the date of the enactment of this Act which results in a rate of duty of more than 5 percent ad valorem on any distillate fuel oil or residual fuel oil (provided for in item 475.05 or 475.10 of the Tariff Schedules of the United States) imported for use as fuel (other than for the propulsion of motor vehicles).

(c) LIMITATIONS ON ADJUSTMENTS.—No adjustment made under subsection (b) to any rate of duty may result in a rate of duty which—

(1) is more than the higher of 10 percent ad valorem or $1 a barrel, or

(2) is less than 2 percent ad valorem.

(d) ADJUSTMENTS INCREASING RATES OF DUTY.—

(1) SUBMISSION OF ANY PROPOSED INCREASE IN

DUTY TO THE CONGRESS.—The President shall transmit to the House of Representatives and to the Senate on the same day, and to each House while it is in session, a document setting forth any adjustment which he proposes to make under subsection (b) which increases any rate of duty.

(2) TAKING EFFECT OF ANY SUCH INCREASE.—No adjustment proposed to be made under subsection (b) which increases any rate of duty may take effect sooner than the close of the 60th day after the day on which the document relating to such adjustment is delivered to Congress under paragraph (1).

(e) PROCLAIMING OF ADJUSTMENTS TO RATES OF DUTY.—Subject to the provisions of section (d), the President shall proclaim any adjustment to any rate of duty made by him under subsection (b).

(f) COORDINATION WITH OTHER LAWS.—

(1) (A) Section 232(b) of the Trade Expansion Act of 1962 (relating to national security) is amended by adding at the end thereof the following new sentence: "Nothing in this subsection shall be deemed to authorize the President, after the date of the enactment of this sentence, to adjust imports of petroleum and petroleum products; except that the President may adjust imports of petroleum and petroleum products during any period in which—

55-583 (Pt. 1) O - 75 - 3

"(1) the Congress declares war,

"(2) United States Armed Forces are introduced into hostilities pursuant to specific statutory authorization,

"(3) a national emergency is created by attack upon the United States, its territories or possessions, or its Armed Forces, or

"(4) United States Armed Forces are introduced into such hostilities, situations, or places, or are enlarged in any foreign nation, under circumstances which require a report by the President to the Congress pursuant to section 4(a) of the War Powers Resolution (50 U.S.C. 1453(a)),

but any adjustment made pursuant to this exception shall not apply with respect to articles entered or withdrawn from warehouse for consumption on or after the 60th day after the closing date of the hostilities concerned."

(B) Effective with respect to articles entered or withdrawn from warehouse for consumption on or after the 60th day after the date of the enactment of this Act, no adjustment action taken under section 232(b) of the Trade Expansion Act of 1962 before such date of enactment shall have any force or effect with respect to petroleum or any petroleum product.

(2) Section 101 of the Trade Act of 1974 shall not apply to any rate of duty established by, or to any adjustment of any rate of duty made under, this section.

(3) Petroleum and petroleum products shall not be designated by the President as eligible articles for purposes of title V of the Trade Act of 1974.

PART III—ADMINISTRATIVE AND MISCELLANEOUS PROVISIONS

SEC. 131. IMPORT RESTRICTIONS AND RATES OF DUTY TO BE REFLECTED IN THE TARIFF SCHEDULES OF THE UNITED STATES.

The President shall by proclamation establish a new part 4 in the Appendix of the Tariff Schedules of the United States (19 U.S.C. 1202) and shall reflect therein any quantitative restriction established by part I and any rate of duty established by part II and any modification of any quantitative restriction and adjustment to any rate of duty made by him under part I or II.

SEC. 132. ANNUAL REPORTS.

On or before March 15, 1976, and on or before March 15 of each year thereafter, the President shall make a full and complete report to the Congress on the operation of this Act. Each such report shall include full and complete information with respect to the economies in the domestic consumption of

oil which have been effectuated, the increases in domestic production of oil which have taken place, the factors taken into account in making any modification under subsection (b) or (c) of section 111, and any other information which may be appropriate in assessing the way in which the provisions of this Act are being administered.

SEC. 133. DEFINITIONS.

(a) IN GENERAL.—For purposes of this title—

(1) The term "oil" means petroleum and petroleum products.

(2) The term "petroleum" means crude petroleum provided for in item 475.05 or 475.10 of the Tariff Schedules of the United States.

(3) The term "petroleum product" means any article provided for in part 10 of schedule 4 of the Tariff Schedules of the United States, other than petroleum, natural gas provided for under item 475.15, greases provided for under item 475.55 or 475.60, and mixtures of hydrocarbons in other than liquid form provided for under item 475.70.

(b) ADDITIONAL ARTICLES MAY BE TREATED AS PETROLEUM PRODUCTS FOR PURPOSES OF QUANTITATIVE RESTRICTIONS.—For purposes of this title (other than section 121), the term "petroleum products" may include, but

only if the President proclaims such inclusion to be necessary to carry out the purposes of this Act, one or more of the following articles:

(1) Coal tar articles (benzene, cumene, toluene, and xylene) provided for under item 401.10, 401.26, 401.72, or 401.74 of such Schedules.

(2) Mixtures, consisting wholly of two or more of the coal tar articles referred to in paragraph (1), provided for under item 401.80.

(3) Hydrocarbons provided for under item 429.50 or 429.52.

PART IV—OFFICE OF PETROLEUM IMPORT LICENSING

SEC. 141. ESTABLISHMENT OF OFFICE.

(a) IN GENERAL.—There is hereby established within the Federal Energy Administration the Office of Petroleum Import Licensing (hereinafter in this title referred to as the "Office").

(b) ADMINISTRATION.—The Office shall be headed by a Deputy Administrator for Petroleum Import Licensing (hereinafter in this title referred to as the "Deputy Administrator") who, in the performance of his duties under this title, shall be under the supervision of the Administrator of the Federal Energy Administration.

SEC. 142. FUNCTIONS OF THE DEPUTY ADMINISTRATOR.

The Deputy Administrator shall administer the import licensing system established under section 112.

SEC. 143. CONFORMING AMENDMENT.

Section 4(c) of the Federal Energy Administration Act of 1974 is amended to read as follows:

"(c) There shall be in the Administration three Deputy Administrators (one of whom shall be the Deputy Administrator for Petroleum Import Licensing), who shall be appointed by the President, by and with the advice and consent of the Senate, and who shall receive compensation at the rate prescribed for offices and positions at level III of the Executive Schedule (5 U.S.C. 5314)."

TITLE II—OTHER ENERGY CONSERVATION PROGRAMS

PART I—AUTOMOBILE-FUEL MILEAGE

SEC. 211. DEFINITIONS.

(a) As used in this part:

(1) The term "EPA Administrator" means the Administrator of the Environmental Protection Agency.

(2) The term "automobile" means a four-wheeled vehicle propelled by fuel which is manufactured primarily for use on public streets, roads, and highways

(except any vehicle operated exclusively on a rail or rails), and which is rated at ten thousand pounds gross vehicle weight or less.

(3) The term "passenger automobile" means any automobile which has as its primary intended function the transportation of not more than ten individuals.

(4) The term "light-duty truck and multipurpose passenger vehicle" means any automobile which is not a passenger automobile.

(5) The term "average fuel economy" (except for purposes of section 212 (a) (4) of this Act) means (A) the total number of passenger automobiles manufactured in a given model year by a manufacturer (including all passenger automobiles manufactured by persons who control, or are controlled by or under common control with such manufacturer, but excluding any passenger automobile exported in the model year) divided by (B) a sum of terms, each term of which is a fraction created by dividing—

(i) the number of passenger automobiles of a given model type manufactured in such model year by

(ii) the fuel economy measured for such model type rounded to the nearest mile per gallon, as determined by the EPA Administrator.

(6) The term "dealer" means any person engaged in the business of selling new automobiles to purchasers who buy for purposes other than resale.

(7) The term "fuel" means any liquid or gaseous fuel.

(8) The term "fuel economy" refers to the average number of miles traveled by an automobile per gallon of fuel consumed, as determined by the EPA Administrator in accordance with test procedures established under section 212 (d) of this Act.

(9) The term "manufacturer" means any person engaged in the manufacture, assembly, or importation of automobiles.

(10) The term "to manufacture" (except for purposes of section 212 (a) (2) of this Act) means to manufacture in the United States or to import into the United States.

(11) The term "model type" means a particular class of automobile, as defined by the EPA Administrator.

(12) The term "model year" with reference to any specific calendar year means the manufacturer's annual production period (as determined by the EPA Administrator) which includes January 1 of such calendar year. If the manufacturer has no annual production

period, the term "model year" shall mean the calendar year.

(13) The term "Secretary" means the Secretary of Transportation.

(b) (1) In calculating the average fuel economy under subsection (a) (5), the EPA Administrator shall separate the total passenger automobiles manufactured by a manufacturer into two categories:

(A) Passenger automobiles domestically manufactured by such manufacturer.

(B) Passenger automobiles not domestically manufactured by such manufacturer.

The EPA Administrator shall calculate the average fuel economy of each such separate category and each category shall be treated as manufactured by a separate manufacturer for purposes of this part.

(2) For purposes of this subsection, an automobile shall be considered domestically manufactured if at least 75 percent of the cost to the manufacturer of such automobile is attributable to value added in the United States or Canada, unless the assembly of such automobile is completed in Canada and such automobile is not imported into the United States prior to the expiration of 30 days after the end of such model year.

SEC. 212. AVERAGE FUEL ECONOMY STANDARDS APPLICABLE TO EACH MANUFACTURER.

(a) (1) Except as otherwise provided in paragraph (2) and in subsection (b) (3) (B), the average fuel economy for all passenger automobiles manufactured by any manufacturer in any model year after model year 1977 shall not be less than the number of miles per gallon determined under the following table:

Model year:	Average fuel economy (in miles per gallon)
1978	18.5.
1979	19.5.
1980	20.5.
1981	Determined by Secretary under subsection (b).
1982	Determined by Secretary under subsection (b).
1983	Determined by Secretary under subsection (b).
1984	Determined by Secretary under subsection (b).
1985 or thereafter	28.0.

(2) On application of a manufacturer, who manufactured (whether or not in the United States) fewer than ten thousand automobiles in the second model year preceding the model year for which the application is made, the Secretary may by rule exempt such manufacturer from paragraph (1). Such exemption may only be granted if (A) such exemption will not significantly detract from the purposes of this part, and (B) such exemption is necessary to avoid an unreasonable burden on such manufacturer. Simul-

taneously with the issuance of any such exemptions, the Secretary shall establish alternative average fuel economy standards for such manufacturer which shall represent the maximum feasible level of fuel economy for such manufacturer. In determining the number of automobiles manufactured by a manufacturer for purposes of this paragraph, there shall be included all automobiles manufactured by persons who control, are controlled by, or are under common control with such manufacturer.

(3) Beginning in 1977, the Secretary shall review, not later than January 1 of each calendar year, standards promulgated pursuant to this part which will take effect in future model years and shall publish the results of such review in the Federal Register and shall send such review to the members of the Commerce Committees of the Senate and House of Representatives. The review required to be published by January 1, 1979, and sent to the Congress shall include a comprehensive analysis of the program required by this part. Such analysis shall include an assessment of the ability of the Nation to meet the average fuel economy requirements for 1985 as specified in subsection (a) (1) of this section, and any legislative recommendations the Secretary might have for improving the program required by this part.

(4) The Secretary shall, by rule, prescribe average

fuel economy standards for all light-duty trucks and multipurpose passenger vehicles manufactured by any manufacturer in any model year after model year 1977. Such a rule may provide for separate standards for different classes of such trucks and vehicles and shall be based upon the maximum feasible average fuel economy level which the Secretary determines manufacturers of light-duty trucks and multipurpose passenger vehicles or classes thereof are able to achieve in each model year after year 1977.

(b) (1) Not later than July 1, 1977, the Secretary shall establish, by rule, average fuel economy standards for new automobiles manufactured in model years 1981 through 1984. The standards, which shall be equally applicable to each manufacturer, shall be set for each such model year at a level which the Secretary determines is the maximum feasible level and shall be promulgated in a manner which will result in steady progress toward meeting an average fuel economy level of 28 miles per gallon for model year 1985.

(2) Any standard prescribed under paragraph (1), and any amendment prescribed under paragraph (3), shall be promulgated not later than 18 months prior to the beginning of the model years to which such standard or amendment will apply.

(3) (A) The Secretary may, from time to time, upon the basis of new information, amend any average fuel econ-

omy performance standard established under paragraph (1), except that no such amendment, modification, or revision may reduce the standard for average fuel economy below that necessary to meet the model year 1980 average fuel economy level specified in subsection (a) (1).

(B) If in the course of preparing the review required to be published on January 1, 1979, pursuant to subsection (a) (3) of this section, the Secretary finds that the model year 1985 average fuel economy level specified in subsection (a) (1) should be modified because such level cannot reasonably be attained or because a higher level may reasonably be attained, the Secretary may by rule modify such level, to a level that represents the maximum feasible average fuel economy level. The Secretary shall transmit to the Congress notice of the establishment of such modified level. Such modified level shall take effect 60 days on the date or dates specified in such notice, but not sooner than the end of the first period of fifteen calendar days of continuous session of Congress (within the meaning of section 906(b) of title 5, United States Code) after the date on which such amendment is transmitted to it; except that such an amendment shall not take effect if, between the date of transmittal and the end of such fifteen-day period, either House passes a resolution of that House, the matter after the resolving clause of which is as follows: "That the does not

favor the modification of the average fuel economy standard, transmitted to the Congress by the President on , 19 .", the first blank space therein being filled with the name of the resolving House and the other blank spaces therein being appropriately filled.

(C) Section 908 and sections 910 through 913 of title 5, United States Code, shall apply to any resolution described in subparagraph (B), and for purposes of consideration of a resolution under this paragraph, the twenty calendar days specified in section 911 of title 5, United States Code, shall be shortened to five calendar days, any reference to a resolution under section 908 and sections 910 through 913 of title 5, United States Code, shall be deemed a reference to a resolution described in subparagraph (B), and any reference to a reorganization plan shall be deemed a reference to an amendment to which this paragraph applies.

(4) For purposes of this subsection, in determining the maximum feasible average fuel economy, the Secretary shall consider:

(A) technological feasibility;

(B) economic practicality;

(C) relationship to other Federal motor vehicle standards (except as otherwise provided in subsection (c)(4)); and

(D) the purposes of this Act.

(c) (1) If the Secretary (after consultation with the EPA Administrator) determines under paragraph (3) that in any model year there will be an emission standards penalty, he shall adjust the fuel economy rate applicable to such year by subtracting a number of miles per gallon (rounded off to the nearest tenth of a mile per gallon) equal to the amount of such penalty.

(2) For purposes of this subsection:

(A) The term "emission standards penalty" means the number of miles per gallon which the Secretary determines is equal to (i) the average fuel economy which all passenger automobiles sold in a model year would achieve, if such automobiles were subject only to the 1975 emission standards, less (ii) the average fuel economy which all such automobiles are likely to achieve while meeting the emission standards actually applicable to such automobiles.

(B) The term "1975 emission standards" means the following standards:

(i) For hydrocarbons, 1.5 grams per mile.

(ii) For carbon monoxide, 15 grams per mile.

(iii) For oxides of nitrogen, 3.1 grams per mile.

(C) The term "fuel economy rate" means the rate under subsection (a) (1), as such rate may be modified under subsection (b).

(3) The Secretary shall commence a proceeding with respect to a determination under paragraph (1) on petition of any manufacturer. Such a petition may be filed only within the 18-month period preceding the beginning of the model year to which it relates. The Secretary shall allow interested persons an opportunity for oral as well as written presentations of data, views, and arguments. He shall render a decision in any such proceeding within 60 days after the filing of the petition.

(4) The Secretary may not make any modification of fuel economy rates to take account of any decrease in fuel economy associated with emissions standards except in accordance with this subsection.

(d) (1) Compliance by a manufacturer with subsection (a) shall be determined by the EPA Administrator (in accordance with test procedures established by the EPA Administrator by rule)—

(A) by calculating for purposes of subsection (a) (1) the average fuel economy of all passenger automobiles manufactured by such manufacturer during such model year, and

(B) by calculating for purposes of subsection (a) (4) the fuel economy of all light duty trucks and multipurpose passenger vehicles (or each class thereof, as

may be appropriate) manufactured by such manufacturer in such model year.

Test procedures so established shall be the procedures utilized by the EPA Administrator for model year 1975 (weighted 55 percent urban cycle, and 45 percent highway cycle) or procedures which yield comparable results. Such procedures, to the extent practicable, shall require that fuel economy tests be conducted in conjunction with emissions test conducted under section 206 of the Clean Air Act (42 U.S.C. 1875f–5). The EPA Administrator shall report the findings of such compliance determinations to the Secretary.

(2) In determining whether a manufacturer has complied with subsection (a)—

(A) if the average fuel economy of a manufacturer is less than 0.5 miles per gallon less than the applicable standard under subsection (a), the manufacturer shall be deemed to have complied with subsection (a), and

(B) if the average fuel economy of a manufacturer exceeds the applicable standard under subsection (a) for a model year by more than 0.5 miles per gallon—

(i) he may carry back such excess to the preceding model year to the extent that his average fuel economy was more than 0.5 miles per gallon less than the applicable standard for such preceding year, and

(ii) to the extent such excess was not carried back to the preceding year, he may carry forward the excess to the year succeeding the year of the excess.

The Secretary shall prescribe rules to carry out this subsection. To the extent that a carryback under clause (i) reduces a manufacturer's liability for a civil penalty paid under section 216, the Secretary shall refund to such manufacturer an amount equal to the amount of such reduction.

(e) (1) Any person who may be adversely affected by any rule promulgated under this section may at any time prior to 60 days after such rule is promulgated file a petition in the United States Court of Appeals for the District of Columbia, or any circuit wherein such person resides or has his or her principal place of business, for judicial review of such rule. A copy of the petition shall be forthwith transmitted by the clerk of such court to the officer who prescribed the rule. Such officer shall thereupon cause to be filed in such court the record of the proceedings upon which the rule which is under review was based, as provided in section 2112 of title 28, United States Code. Upon the filing of such petition, the court shall have jurisdiction to review the rule in accordance with chapter 7 of title 5, United States Code, and to grant appropriate relief as provided in such chapter.

(2) If the petitioner applies to the court for leave to adduce additional evidence, and shows to the satisfaction of the court that such additional evidence is material and that there were reasonable grounds for the failure to adduce such evidence in the proceeding before the officer who prescribed the rule, the court may order such additional evidence (and evidence in rebuttal thereof) to be taken before such officer, and be adduced in a hearing, in such manner and upon such terms and conditions as the court may deem proper. Such officer may modify any earlier finding as to the facts, or make new findings, by reason of the additional evidence so taken, and shall file such modified or new findings, and recommendations, if any, for the modification or setting aside of the previously promulgated rule, with the return of such additional evidence.

(3) The judgment of the court affirming or setting aside, in whole or in part, any such rule of the officer who prescribed the rule shall be final, subject to review by the Supreme Court of the United States upon certiorari or certification as provided in section 1254 of title 28, United States Code.

(4) The remedies provided for in this section shall be in addition to and not in lieu of any other remedies provided by law.

(f) (1) The Secretary shall prescribe regulations requir-

ing each manufacturer to submit a report to the Secretary during the 30-day period preceding the beginning of each model year, and during the 30-day period beginning on the 180th day of each model year. Each such report shall contain a statement as to whether such manufacturer will comply with applicable requirements under subsection (a); a plan which describes the steps the manufacturer intends to take in order to comply with such requirements; and such other matter as the Secretary may require.

(2) Whenever a manufacturer determines that a plan submitted under paragraph (1) which he stated was sufficient to insure compliance with applicable requirements is not sufficient to insure such compliance, he shall submit a report containing a revised plan which specifies any additional measures which he intends to take in order to comply with such requirements, and a statement as to whether such plan is sufficient to insure such compliance.

SEC. 213. DUTIES AND POWERS OF THE SECRETARY AND ADMINISTRATOR.

(a) (1) For the purpose of carrying out the provisions of this part, the Secretary or the EPA Administrator, or their duly designated agents, may hold such hearings, take such testimony, sit and act at such times and places, administer such oaths, and require, by subpena or otherwise, the attendance and testimony of such witnesses

and the production of such books, papers, correspondence, memorandums, contracts, agreements, or other records as the Secretary, EPA Administrator, or such agents deem advisable. The Secretary, EPA Administrator, or their duly designated agents, shall at all reasonable times have access to, and for the purpose of examination, the right to copy any documentary evidence of any person having materials or information relevant to any function of the Secretary or EPA Administrator under this part. The Secretary or EPA Administrator is authorized to require, by general or special orders, any person to file, in such form as the Secretary or EPA Administrator may prescribe, reports or answers in writing to specific questions relating to any function of the Secretary or EPA Administrator under this part. Such reports and answers shall be made under oath or otherwise, and shall be filed with the Secretary or EPA Administrator within such reasonable period as he may prescribe.

(2) The district courts of the United States for a judicial district in the jurisdiction of which an inquiry is carried on may, in the case of contumacy or refusal to obey a duly authorized subpena or order of the Secretary, the EPA Administrator, or their duly designated agents, issued under paragraph (1) of this subsection, issue an order requiring compliance with such subpena or order. Any failure to obey

such an order of the court may be punished by such court as a contempt thereof.

(3) Witnesses summoned pursuant to this subsection shall be paid the same fees and mileage that are paid witnesses in the courts of the United States.

(b) (1) Every manufacturer of automobiles shall establish and maintain such records, make such reports, conduct such tests, and provide such items and information as the Secretary or EPA Administrator may reasonably require to enable the Secretary or EPA Administrator to carry out their duties under this part and under any rules or regulations promulgated pursuant to this part. Such manufacturer shall, upon request of a duly designated agent of the Secretary or EPA Administrator, permit such agent to inspect finished automobiles and appropriate books, papers, records, and documents. Such manufacturer shall make available all of such items and information in accordance with such reasonable rules as the Secretary or EPA Administrator may prescribe.

(2) The district courts of the United States for a judicial district in which an inspection is carried out or requested may, if a manufacturer of automobiles refuses to accede to any reasonable requirement or request, issued or made under paragraph (1) of this subsection, issue an order requiring

compliance with such requirement or request. Any failure to obey such an order of the court may be punished by such court as a contempt thereof.

(c) (1) Except as provided in paragraph (2), the Secretary or EPA Administrator shall disclose information obtained under this part to the public in accordance with section 552 of title 5, United States Code, except that information may be withheld from disclosure on the grounds specified in subsection (b) (4) of such section only if it contains a trade secret which if disclosed would result in significant competitive damage.

(2) Information contained in a report submitted under section 212 (f), disclosure of which the Secretary determines may cause significant competitive damage, may not be disclosed until after the close of the model year to which such report relates; except (A) in a proceeding under section 212 (b) (1), (b) (3), or (c); (B) to duly authorized officers or employees of the United States; or (C) to committees of Congress.

SEC. 214. LABELING AND ADVERTISING.

(a) (1) Beginning no later than 90 days after the date of enactment of this Act, each manufacturer shall cause to be affixed and each dealer shall cause to be maintained on each new automobile, in a prominent place, a sticker indicating the fuel economy which a prospective purchaser can

expect from such automobile, representative average annual fuel costs associated with the operation of such automobile, and the range of fuel economy performance of automobiles of similar size and weight (as determined by the EPA Administrator). If the fuel economy of an automobile manufactured in a model year is less than the miles per gallon level specified in the average fuel economy standard specified by rule under section 212 (a) (1) of this Act, such sticker shall disclose that such automobile's fuel economy is less than the Federal standard for average fuel economy. Such sticker shall include a written statement that written information respecting the fuel economy of other automobiles manufactured in such model year is available from the dealer in a simple and readily understandable form in order to facilitate comparison among the various model types. The form and content of such sticker shall be prescribed by the EPA Administrator by rule, after consultation with the Federal Trade Commission and the Secretary.

(2) The EPA Administrator, not later than February 1, 1976, shall by rule establish procedures requiring dealers to make available to prospective purchasers information compiled by the EPA Administrator under paragraph (1).

(b) Section 3 of the Automobile Information Disclosure Act (15 U.S.C. 1232) is amended by striking out in

the first paragraph "disclosing the following information concerning" and inserting in lieu thereof "disclosing the information required by section 214 (a) of the Energy Conservation and Conversion Act of 1975, together with the following information concerning".

SEC. 215. PROHIBITED CONDUCT.

The following conduct is prohibited:

(1) the failure to comply with any requirement of section 212 (a) of this Act;

(2) the failure to comply with any provision of this part (other than section 212 (a) of this Act) or any standard, rule, regulation, or order issued pursuant to such a provision;

(3) the failure to provide information as required in accordance with this part;

(4) the failure to permit inspection pursuant to this part; and

(5) the failure to comply with any requirement under section 214 (a) (2) of this Act.

SEC. 216. CIVIL PENALTY.

(a) (1) If through testing, inspection, investigation, or research carried out pursuant to this Act, or otherwise, the Secretary determines that any manufacturer has not complied with any requirement of section 212 of this Act, he shall immediately notify such manufacturer and shall publish

notice of such determination in the Federal Register. The notification to the manufacturer shall include all information upon which the determination of the Secretary is based. Such notification (including such information) shall be available to any interested person. The Secretary shall afford such manufacturer an opportunity to present data, views, and arguments to establish that there is no violation of section 212 and shall afford other interested persons an opportunity to present data, views, and arguments respecting the determinations of the Secretary.

(2) If, after such presentations by the manufacturer and interested persons, the Secretary determines that such manufacturer has not complied with any requirement under section 212 of this Act, the Secretary shall assess the penalties provided for under subsection (b).

(b) (1) (A) Any manufacturer who the Secretary determines under subsection (a) to have violated a provision of section 212 (a) (1) of this Act, shall be liable to the United States for a civil penalty equal to (i) $5.00 for each tenth of a mile per gallon by which the average fuel economy of the automobile manufactured by such manufacturer during such model year is exceeded by the applicable average fuel economy standard established under section 212 (a) (1) of this Act, multiplied by (ii) the total number of automobiles manufactured by such manufacturer during such model year.

Such penalty shall be assessed by the Secretary and collected in a civil action brought by the Attorney General.

(B) Any fuel economy measurement for purposes of paragraph (A) shall be rounded off to the nearest one-tenth gallon (in accordance with rules of the EPA Administrator).

(2) Any person who the Secretary determines after opportunity for presentation of data, views, and arguments to have violated a provision of section 215 of this Act, other than paragraph (1) thereof, shall be liable to the United States for a civil penalty of not more than $10,000 for each violation; each day of a continuing violation constituting a separate violation.

(3) The amount of such civil penalty shall be assessed by the Secretary by written notice. The Secretary shall have the discretion to compromise, modify, or remit, with or without conditions, any civil penalty assessed against a manufacturer only to the extent (A) necessary to prevent the insolvency or bankruptcy of such manufacturer, or (B) such manufacturer shows that noncompliance resulted from an act of God, a strike, or a fire.

SEC. 217. RELATIONSHIP TO STATE LAW.

After the effective date of any standard issued or effective under this part relating to fuel economy performance standards for any automobile or to fuel economy labeling or advertising of any new automobile, no State or political sub-

division thereof may adopt or enforce any law or regulation relating to such matters which is applicable to such automobile, unless such law or regulation is identical to a standard under this part.

PART II—INTERCITY BUSES, RADIAL TIRES, AND REREFINED OIL

SEC. 221. REPEAL OF EXCISE TAX ON BUSES USED IN INTERCITY PUBLIC TRANSPORTATION.

(a) GENERAL RULE.—Paragraph (6) of section 4063 (relating to exemption from excise tax for local transit buses) is amended to read as follows:

"(6) PUBLIC TRANSPORTATION BUSES.—The tax imposed under section 4061(a) shall not apply in the case of automobile bus chassis or automobile bus bodies which are to be used predominantly by the purchaser in public passenger transportation service."

(b) EFFECTIVE DATE.—

(1) IN GENERAL.—The amendment made by subsection (a) shall apply with respect to articles sold on or after the date of the enactment of this Act.

(2) WHEN SOLD.—For purposes of paragraph (1), an article shall not be considered sold before the date of the enactment of this Act unless possession or right to possession passes to the purchaser before such date.

(3) TRANSITIONAL RULE FOR LEASES, INSTALLMENT CONTRACTS, ETC.—In the case of—

(A) a lease,

(B) a contract for the sale of an article where it is provided that the price shall be paid by installments and title to the article sold does not pass until a future date notwithstanding partial payment by installments,

(C) a conditional sale, or

(D) a chattel mortgage arrangement wherein it is provided that the sale price shall be paid in installments,

entered into before the date of the enactment of this Act, payments made on or after such date with respect to the article leased or sold shall, for purposes of paragraph (1), be considered as payments made with respect to an article sold on or after such date, if the lessor or vendor establishes that the amount of payments payable on or after such date with respect to such article has been reduced by an amount equal to that portion of the tax applicable with respect to the lease or sale of such article which is due and payable on or after such date. If the lessor or vendor does not establish that the payments have been so reduced, they shall be

treated as payments made with respect to an article sold before the date of the enactment of this Act.

SEC. 222. REPEAL OF EXCISE TAX ON RADIAL TIRES.

(a) REPEAL OF TAX ON NEW RADIAL TIRES.—Section 4073 (relating to exemptions from tax on tires and tubes) is amended by adding at the end thereof the following new subsection:

"(d) RADIAL TIRES.—The tax imposed by section 4071 shall not apply to radial tires."

(b) REPEAL OF TAX ON TREAD RUBBER USED TO RETREAD OR RECAP RADIAL TIRES.—Subsection (c) of section 4073 (relating to exemption from tax on tread rubber in certain cases) is amended by striking out "such person" and all that follows and inserting in lieu thereof the following: "such person—

"(1) in the recapping or retreading of radial tires, or

"(2) otherwise than in the recapping or retreading of tires of the types used on highway vehicles."

(c) DEFINITION OF RADIAL TIRE.—Section 4072 (relating to definitions) is amended by adding at the end thereof the following new subsection:

"(d) RADIAL TIRE.—For purposes of this part, the term 'radial tire' means a tire of the type used on highway

vehicles in which the ply cords which extend to the beads of such tire are laid at substantially 90 degrees to the center line of the tire's tread."

(d) TECHNICAL AMENDMENT.—Subparagraph (L) of section 6416 (b) (2) (relating to specified uses and resales) is amended to read as follows:

"(L) in the case of tread rubber in respect of which tax was paid under section 4071 (a) (4), used or sold for use (i) in recapping or retreading radial tires (as defined in section 4072 (d)) or (ii) otherwise than in the recapping or retreading of tires of the type used on highway vehicles (as defined in section 4072 (c)), unless credit or refund of such tax is allowable under subsection (b) (3);".

(e) EFFECTIVE DATE.—

(1) IN GENERAL.—The amendments made by this section shall apply with respect to sales of radial tires (as defined in section 4072 (d) of the Internal Revenue Code of 1954), and tread rubber (as defined in section 4072 (b) of such Code), after March 17, 1975.

(2) FLOOR STOCKS REFUNDS.—Section 6412 (a) (relating to floor stocks refunds) is amended by inserting immediately before paragraph (2) the following new paragraph:

"(1) RADIAL TIRES.—Where before March 18,

1975, any radial tire (as defined in section 4072 (d)) subject to the tax imposed by section 4071 (a) has been sold by the manufacturer, producer, or importer and on such date is held by a dealer and has not been used and is intended for sale, there shall be credited or refunded (without interest) to the manufacturer, producer, or importer an amount equal to the tax paid by such manufacturer, producer, or importer on his sale of such tire if claim for such credit or refund is filed with the Secretary or his delegate on or before December 31, 1975, based upon a request submitted to the manufacturer, producer, or importer before October 1, 1975, by the dealer who held such tire in respect of which the credit or refund is claimed, and, on or before December 31, 1975, reimbursement has been made to such dealer by such manufacturer, producer, or importer for the tax on such tire or written consent has been obtained from such dealer to allowance of such credit or refund."

SEC. 223. REREFINED LUBRICATING OIL.

(a) IN GENERAL.—Section 4093 (relating to exemption of sales to producers) is amended to read as follows:

"SEC. 4093. EXEMPTIONS.

"(a) SALES TO MANUFACTURERS OR PRODUCERS FOR RESALE.—Under regulations prescribed by the Secretary or his delegate, no tax shall be imposed by section 4091 on

lubricating oils sold to a manufacturer or producer of lubricating oils for resale by him.

"(b) USE IN PRODUCING REREFINED OIL.—

"(1) SALES TO REREFINERS.—Under regulations prescribed by the Secretary or his delegate, no tax shall be imposed by section 4091 on lubricating oil sold for use in mixing with used or waste lubricating oil which has been cleaned, renovated, or rerefined. Any person to whom lubricating oil is sold tax-free under this paragraph shall be treated as the producer of such lubricating oil.

"(2) USE IN PRODUCING REREFINED OIL.—Under regulations prescribed by the Secretary or his delegate, no tax shall be imposed by section 4091 on lubricating oil used in producing rerefined oil to the extent that the amount of such lubricating oil does not exceed 55 percent of such rerefined oil.

"(3) REREFINED OIL DEFINED.—For purposes of this subsection, the term 'rerefined oil' means oil 25 percent or more of which is used or waste lubricating oil which has been cleaned, renovated, or rerefined."

(b) CONFORMING AMENDMENT.—Section 4092 (a) is amended by striking out "4093" and inserting in lieu thereof "4093 (a)".

(c) CLERICAL AMENDMENT.—The table of sections for

subpart B of part III of subchapter A of chapter 32 is amended by striking out the item relating to section 4093 and inserting in lieu thereof the following:

"Sec. 4093. Exemptions."

(d) EFFECTIVE DATE.—The amendments made by this section shall apply to sales after March 17, 1975.

PART III—TAX INCENTIVES FOR CERTAIN ENERGY-RELATED IMPROVEMENTS OF BUILDINGS

SEC. 231. INSULATION OF PRINCIPAL RESIDENCE.

(a) GENERAL RULE.—Subpart A of part IV of subchapter A of chapter 1 (relating to credits allowable) is amended by inserting immediately before section 45 the following new section:

"SEC. 44A. INSULATION OF PRINCIPAL RESIDENCE.

"(a) GENERAL RULE.—In the case of an individual, there shall be allowed as a credit against the tax imposed by this chapter for the taxable year an amount equal to 30 percent of the qualified insulation expenditures paid by the taxpayer during the taxable year with respect to any residence to the extent that such expenditures do not exceed $500.

"(b) LIMITATIONS.—

"(1) APPLICATION WITH OTHER CREDITS.—The credit allowed by subsection (a) shall not exceed the amount of the tax imposed by this chapter for the tax-

able year reduced by the sum of the credits allowable under—

"(A) section 33 (relating to foreign tax credit),

"(B) section 37 (relating to retirement income),

"(C) section 38 (relating to investment in certain depreciable property),

"(D) section 40 (relating to expenses of work incentive programs),

"(E) section 41 (relating to contributions to candidates for public office),

"(F) section 42 (relating to credit for personal exemptions), and

"(G) section 44 (relating to purchase of new principal residence).

"(2) PRIOR EXPENDITURES TAKEN INTO ACCOUNT.—If—

"(A) the taxpayer made qualified insulation expenditures with respect to any residence in any prior taxable year, or

"(B) any prior occupant of any residence made qualified insulation expenditures with respect to such residence,

then subsection (a) shall be applied with respect to

such residence for the taxable year by reducing (but not below zero) the $500 amount contained in such subsection by the aggregate of the expenditures described in subparagraphs (A) and (B).

"(3) VERIFICATION.—No credit shall be allowed under subsection (a) with respect to any qualified insulation expenditures unless such expenditures are verified in such manner as the Secretary or his delegate shall prescribe by regulations.

"(c) DEFINITIONS AND SPECIAL RULES.—For purposes of this section—

"(1) QUALIFIED INSULATION EXPENDITURES.—The term 'qualified insulation expenditures' means any amount paid by an individual for any installation (other than pursuant to a reconstruction of the dwelling unit) which occurs after March 17, 1975, and before January 1, 1978, of insulation in any dwelling unit which—

"(A) at the time of such installation is used by the individual as his principal residence; and

"(B) is in existence on March 17, 1975, and used on such date by one or more individuals as a residence.

Such term shall only include amounts paid for the original installation of any insulation in a dwelling unit.

"(2) INSULATION.—The term 'insulation' means any insulation, storm (or thermal) window or door, or any other similar item—

"(A) which is specifically and primarily designed to reduce, when installed in or on a building, the heat loss or gain of such building,

"(B) the original use of which commences with the taxpayer,

"(C) which has a useful life to the taxpayer of at least 3 years, and

"(D) which meets such performance standards as the Secretary or his delegate may prescribe by regulations after consultation with the Administrator of the Federal Energy Administration and the Secretary of Housing and Urban Development.

"(3) JOINT OCCUPANCY.—In the case of any dwelling unit which is jointly occupied and is used during any calendar year as a principal residence, by two or more individuals—

"(A) the amount of the credit allowable under subsection (a) (after applying subsection (b) (2)) with respect to any qualified insulation expenditures paid during such calendar year by any of such individuals with respect to such dwelling unit shall be determined by treating all of such individuals as one

taxpayer whose taxable year is such calendar year; and

"(B) each of such individuals shall be allowed a credit under subsection (a) for the taxable year in which such calendar year ends (subject to the limitation of subsection (b)(1)) in an amount which bears the same ratio to the amount determined under subparagraph (A) as the amount paid by such individual during such calendar year for such expenditures bears to the aggregate of the amounts paid by all of such individuals during such calendar year for such expenditures.

"(4) TENANT-STOCKHOLDER IN COOPERATIVE HOUSING CORPORATION.—In the case of an individual who holds stock as a tenant-stockholder (as defined in section 216) in a cooperative housing corporation (as defined in such section), such individual—

"(A) shall be treated as owning the dwelling unit which he is entitled to occupy as such stockholder; and

"(B) shall be treated as having paid his tenant-stockholder's proportionate share (as defined in section 216(b)(3)) of any qualified insulation expenditures paid by such corporation.

"(d) REDUCTION OF BASIS.—The basis of any prop-

erty shall not be increased by the amount of any qualified insulation expenditures made with respect to such property to the extent of the amount of any credit allowed under this section with respect to such expenditures.

"(e) TERMINATION.—This section shall not apply to any amount paid after December 31, 1977."

(b) TECHNICAL AND CONFORMING AMENDMENTS.—

(1) The table of sections for such subpart A is amended by inserting immediately before the item relating to section 45 the following new item:

"Sec. 44A. Insulation of principal residence."

(2) Section 56(a)(2) (relating to imposition of minimum tax) is amended by striking out "and" at the end of clause (vi), by striking out "; and" at the end of clause (vii) and inserting in lieu thereof ", and", and by inserting after clause (vii) the following new clause:

"(viii) section 44A (relating to insulation of principal residence); and".

(3) Section 56(c)(1) (relating to tax carryovers) is amended by striking out "and" at the end of subparagraph (F), by striking out "exceed" at the end of subparagraph (G) and inserting in lieu thereof "and", and by inserting after subparagraph (G) the following new subparagraph:

"(H) section 44A (relating to insulation of principal residence), exceed".

(4) Subsection (a) of section 1016 (relating to adjustments to basis) is amended by striking out the period at the end of paragraph (22) and inserting in lieu thereof a semicolon and by inserting after paragraph (22) the following new paragraph:

"(23) to the extent provided in section 44A(d), in the case of property with respect to which a credit has been allowed under section 44A."

(5) Section 6096(b) (relating to designation of income tax payment to Presidential Election Campaign Fund) is amended by striking out "and 44" and inserting in lieu thereof "44, and 44A".

(c) EFFECTIVE DATE.—The amendments made by this section shall apply to amounts paid after March 17, 1975, in taxable years ending after such date.

SEC. 232. RESIDENTIAL SOLAR ENERGY EQUIPMENT.

(a) GENERAL RULE.—Subpart A of chapter IV of subchapter A of chapter 1 (relating to credits allowable) is amended by inserting immediately before section 45 the following new section:

"SEC. 44B. RESIDENTIAL SOLAR ENERGY EQUIPMENT.

"(a) GENERAL RULE.—In the case of an individual,

there shall be allowed as a credit against the tax imposed by this chapter for the taxable year an amount equal to 25 percent of the qualified solar heating and cooling equipment expenditures paid by the taxpayer during the taxable year with respect to any residence to the extent that such expenditures do not exceed $8,000.

"(b) LIMITATIONS.—

"(1) APPLICATION WITH OTHER CREDITS.—The credit allowed by subsection (a) shall not exceed the amount of the tax imposed by this chapter for the taxable year reduced by the sum of the credits allowable under—

"(A) section 33 (relating to foreign tax credit),

"(B) section 37 (relating to retirement income),

"(C) section 38 (relating to investment in certain depreciable property),

"(D) section 40 (relating to expenses of work incentive programs),

"(E) section 41 (relating to contributions to candidates for public office),

"(F) section 42 (relating to credit for personal exemptions),

"(G) section 44 (relating to purchase of new principal residence), and

"(H) section 44A (relating to insulation of principal residence).

"(2) PRIOR EXPENDITURES TAKEN INTO ACCOUNT.—If—

"(A) the taxpayer made qualified solar energy equipment expenditures with respect to any residence in any prior taxable year, or

"(B) any prior owner of such residence made qualified solar energy equipment expenditures with respect to such residence,

then subsection (a) shall be applied with respect to such residence for the taxable year by reducing (but not below zero) the dollar amount contained in such subsection by the aggregate of the expenditures described in subparagraphs (A) and (B).

"(c) DEFINITIONS AND SPECIAL RULES.—For purposes of this section—

"(1) QUALIFIED SOLAR ENERGY EQUIPMENT EXPENDITURES.—The term 'qualified solar energy expenditures' means any amount paid by an individual for any installation which occurs after March 17, 1975, and before January 1, 1981, of solar energy equipment, in

any dwelling unit which at the time of such installation is owned by the individual and used by him as his principal residence (within the meaning of section 1034).

"(2) SOLAR ENERGY EQUIPMENT.—The term 'solar energy equipment' means equipment—

"(A) which, when installed in or on, or when connected to, a building—

"(i) uses solar energy to heat or cool such building or provide hot water for use within such building; and

"(ii) meets the interim or definitive performance criteria prescribed by the Secretary of Housing and Urban Development under the Solar Heating and Cooling Demonstration Act of 1974;

"(B) the original use of which commences with the taxpayer; and

"(C) which has a useful life of at least 3 years.

"(3) JOINT OWNERSHIP.—In the case of any building which is jointly owned, and is used during any calendar year as a principal residence, by two or more individuals—

"(A) the amount of the credit allowable under subsection (a) (after applying subsection (b) (2)) with respect to any qualified solar energy equipment

expenditures paid during such calendar year by any of such individuals with respect to such building shall be determined by treating all of such individuals as one taxpayer whose taxable year is such calendar year; and

"(B) each of such individuals shall be allowed a credit under subsection (a) for the taxable year in which such calendar year ends (subject to the limitation of subsection (b) (1)) in an amount which bears the same ratio to the amount determined under subparagraph (A) as the amount paid by such individual during such calendar year for such expenditures bears to the aggregate of the amounts paid by all of such individuals during such calendar year for such expenditures.

"(4) TENANT-STOCKHOLDER IN COOPERATIVE HOUSING CORPORATION.—In the case of an individual who holds stock as a tenant-stockholder (as defined in section 216) in a cooperative housing corporation (as defined in such section), such individual—

"(A) shall be treated as owning the dwelling unit which he is entitled to occupy as such stockholder; and

"(B) shall be treated as having paid his tenant-stockholder's proportionate share (as defined in sec-

tion 216(b)(3)) of any qualified solar energy equipment expenditures paid by such corporation.

"(d) REDUCTION OF BASIS.—The basis of any property shall not be increased by the amount of any qualified solar energy equipment expenditures made with respect to such property to the extent of the amount of any credit allowed under this section with respect to such expenditures.

"(e) TERMINATION.—This section shall not apply to any amount paid after December 31, 1980."

(b) TECHNICAL AND CONFORMING AMENDMENTS.—

(1) The table of sections for such subpart A is amended by inserting before the item relating to section 45 the following:

"Sec. 44B. Residential solar energy equipment."

(2) Section 56(a)(2) (relating to imposition of minimum tax) is amended by striking out "and" at the end of clause (vii), by striking out "; and" at the end of clause (viii) and inserting in lieu thereof ", and", and by inserting after clause (viii) the following new clause:

"(ix) section 44B (relating to residential solar energy equipment); and".

(3) Section 56(c)(1) (relating to tax carryovers) is amended by striking out "and" at the end of subparagraph (G), by striking out "exceed" at the end of subparagraph (H) and inserting in lieu thereof

"and", and by inserting after subparagraph (H) the following new subparagraph:

"(I) section 44B (relating to residential solar energy equipment), exceed".

(4) Subsection (a) of section 1016 (relating to adjustments to basis) is amended by striking out the period at the end of paragraph (23) and inserting in lieu thereof a semicolon and by inserting after paragraph (23) the following new paragraph:

"(24) to the extent provided in section 44B(d), in the case of property with respect to which a credit has been allowed under section 44B."

(5) Section 6096(b) (relating to designation of income tax payment to Presidential Election Campaign Fund) is amended by striking out "and 44A" and inserting in lieu thereof "44A, and 44B".

(c) EFFECTIVE DATE.—The amendments made by this section shall apply to amounts paid after March 17, 1975, in taxable years ending after such date.

SEC. 233. QUALIFIED ELECTRIC MOTOR VEHICLES.

(a) GENERAL RULE.—Subpart A of part IV of subchapter A of chapter 1 (relating to credits allowable) is amended by inserting immediately before section 45 the following new section:

"SEC. 44C. QUALIFIED ELECTRIC MOTOR VEHICLES.

"(a) GENERAL RULE.—In the case of an individual, there shall be allowed as a credit against the tax imposed by this chapter for the taxable year an amount equal to 25 percent of the amount paid by the taxpayer during the taxable year for a qualified electric motor vehicle to the extent that the aggregate amount paid by the taxpayer during such taxable year and all prior taxable years for such vehicle does not exceed $3,000.

"(b) LIMITATIONS.—

"(1) APPLICATION WITH OTHER CREDITS.—The credit allowed by subsection (a) shall not exceed the amount of the tax imposed by this chapter for the taxable year reduced by the sum of the credits allowable under—

"(A) section 33 (relating to foreign tax credit),

"(B) section 37 (relating to retirement income),

"(C) section 38 (relating to investment in certain depreciable property),

"(D) section 40 (relating to expenses of work incentive programs),

"(E) section 41 (relating to contributions to candidates for public office),

"(F) section 42 (relating to credit for personal exemptions),

"(G) section 44 (relating to purchase of new principal residence),

"(H) section 44A (relating to insulation of principal residence), and

"(I) section 44B (relating to residential solar energy equipment).

"(2) VERIFICATION.—No credit shall be allowed under subsection (a) with respect to any qualified electric motor vehicle unless such expenditures are verified in such manner as the Secretary or his delegate shall prescribe by regulations.

"(c) QUALIFIED NEW ELECTRIC MOTOR VEHICLE DEFINED.—For purposes of this section, the term 'qualified electric motor vehicle' means any highway vehicle—

"(1) which is powered primarily by an electric motor drawing current from rechargeable storage batteries or other portable sources of electric current,

"(2) which is purchased by the taxpayer after June 3, 1975, and before January 1, 1979, for the personal use of the taxpayer or a member of his family, and

"(3) the original use of which begins with the taxpayer or a member of his family.

"(d) TERMINATION.—This section shall not apply to any amount paid after December 31, 1978.".

(b) TECHNICAL AND CONFORMING AMENDMENTS.—

(1) The table of sections for such subpart A is amended by inserting immediately before the item relating to section 45 the following new item:

"Sec. 44C. Qualified electric motor vehicles."

(2) Section 56(a)(2) (relating to imposition of minimum tax) is amended by striking out "and" at the end of clause (viii), by striking out "; and" at the end of clause (ix) and inserting in lieu thereof ", and", and by inserting after clause (ix) the following new clause:

"(x) section 44C (relating to qualified electric motor vehicles); and".

(3) Section 56(c)(1) (relating to tax carryovers) is amended by striking out "and" at the end of subparagraph (H), by striking out "exceed" at the end of subparagraph (I) and inserting in lieu thereof "and", and by inserting after subparagraph (I) the following new subparagraph:

"(J) section 44C (relating to qualified electric motor vehicles), exceed".

(4) Section 6096(b) (relating to designation of

(1) in the case of any fiscal year ending on or before September 30, 1983, $5,000,000,000; and

(2) in the case of the fiscal year ending September 30, 1984, $2,500,000,000.

No amount shall be appropriated to the Trust Fund after September 30, 1984. Any amount which, but for this subsection, would be appropriated to the Trust Fund shall remain in the general fund of the Treasury.

(d) OVERALL LIMITATION ON AMOUNT IN THE TRUST FUND.—

(1) IN GENERAL.—If at any time during a fiscal year ending on or before September 30, 1984, the Secretary determines that the amount in the Trust Fund which is not obligated for expenditure exceeds $10,000,000,000, the Secretary shall transfer the amount of such excess to the general fund of the Treasury.

(2) FISCAL YEAR 1985.—If at any time during the fiscal year ending on September 30, 1985, the Secretary determines that the amount in the Trust Fund which is not obligated for expenditure exceeds $5,000,000,000, the Secretary shall transfer the amount of such excess to the general fund of the Treasury.

(e) MANAGEMENT OF TRUST FUND.—

(1) REPORT.—It shall be the duty of the Secretary to hold the Trust Fund, and to report to the Con-

gress each year on the financial condition and the results of the operations of the Trust Fund during the preceding fiscal year and on its expected condition and operations during the next 5 fiscal years. Such report shall be printed as a House document of the session of the Congress to which the report is made.

(2) INVESTMENT.—

(A) IN GENERAL.—It shall be the duty of the Secretary to invest such portion of the Trust Fund as is not, in his judgment, required to meet current withdrawals. Such investments may be made only in interest-bearing obligations of the United States or in obligations guaranteed as to both principal and interest by the United States. For such purpose, such obligations may be acquired (i) on original issue at the issue price, or (ii) by purchase of outstanding obligations at the market price.

(B) SALE OF OBLIGATIONS.—Any obligation acquired by the Trust Fund may be sold by the Secretary at the market price.

(C) INTEREST ON CERTAIN PROCEEDS.—The interest on, and the proceeds from the sale or redemption of, any obligations held in the Trust Fund shall be credited to and form a part of the Trust Fund.

(f) TERMINATION.—The Secretary shall transfer from the Trust Fund into the general fund of the Treasury any amount in the Trust Fund on October 1, 1985, which is not obligated for expenditure.

SEC. 312. EXPENDITURES FROM TRUST FUNDS FOR ENERGY PROJECTS AND PROGRAMS.

(a) IN GENERAL.—Amounts in the Trust Fund shall be available, as provided by appropriation Acts, for making expenditures before October 1, 1985, for purposes of conserving energy resources and expanding energy supplies through—

(1) basic and applied research programs related to new energy technologies, including (but not limited to)—

(A) solar energy,

(B) geothermal energy,

(C) advanced transportation power systems,

(D) environmental impact (and human safety),

(E) energy conversion,

(F) energy transmission,

(G) energy conservation,

(H) synthetic fuels from fossil sources,

(I) utilization of solid waste,

(J) fusion, and

(K) an engine for an efficient pollution-free automobile;

(2) development and demonstration of new energy technologies, including (but not limited to)—

(A) coal liquefaction and gasification demonstration projects,

(B) aid for powerplant conversions to coal,

(C) loans or subsidies for solid waste energy conversion plants (including production of methane gas from organic wastes),

(D) loans or subsidies for shale oil production,

(E) price guarantees on long-term purchase contracts for other new energy sources,

(F) strip mining reclamation and mine safety programs,

(G) engines for efficient pollution-free automobiles,

(H) loans and subsidies relating to solar energy systems, and

(I) demonstration and development of hot water heating systems, or space heating and cooling systems, for home use;

(3) programs relating to the development of energy resources from properties (including offshore properties)

in which the United States has an interest, including (but not limited to)—

(A) geothermal energy development, and

(B) energy related environmental protection programs and research; and

(4) research projects, or capital expenditures for demonstration projects, relating to local and regional transportation systems, including (but not limited to)—

(A) mass transit by bus,

(B) fixed guideway mass transit,

(C) commuter rail transportation,

(D) intercity rail passenger service,

(E) mass transit terminal facilities,

(F) mass transit operational facilities, and

(G) exclusive or preferential bus lanes.

Nothing in this subsection shall be deemed to authorize any program, project, or other activity not otherwise authorized by law. Amounts required for purposes of this subsection shall be included in the appropriation requests of those Federal agencies authorized to carry out the program, project, or activity.

(b) PROGRAM EVALUATION CRITERIA, ETC.—Not later than 270 days after the date of the enactment of this Act,

the Energy Conservation and Conversion Trust Fund Review Board shall—

(1) develop criteria for evaluating the programs, projects, and activities referred to in paragraphs (1), (2), (3), and (4) of subsection (a),

(2) evaluate potential programs, projects, and activities on the basis of such criteria, and

(3) submit to the Congress a report containing the criteria developed under paragraph (1) together with the Board's recommendations for the proportion of the Trust Fund which should be available for expenditure for each fiscal year for programs, projects, and activities referred to in each paragraph of subsection (a).

SEC. 313. ENERGY CONSERVATION AND CONVERSION TRUST FUND REVIEW BOARD.

(a) ESTABLISHMENT OF BOARD.—There is hereby established a review board to be known as the "Energy Conservation and Conversion Trust Fund Review Board" (hereinafter in this section referred to as the "Board").

(b) MEMBERSHIP.—

(1) NUMBER AND APPOINTMENT.—

(A) IN GENERAL.—The Board shall be composed of 5 members appointed by the President by and with the advice and consent of the Senate.

(B) LIMITATIONS.—An individual may not be appointed as a member of the Board if—

(i) at any time during the 5-year period ending on the date of his nomination such individual held interests in one or more energy related industries and the aggregate fair market value of such interests exceeded $2,500; or

(ii) for any taxable year beginning or ending during such 5-year period such individual received or accrued gross income in excess of $10,000 from one or more energy related industries.

Any individual who after appointment as a member acquires any interest in, or receives or accrues any income from, an energy related industry may not thereafter hold such position. For purposes of this paragraph, an individual shall be deemed to hold any interest held by such individual's spouse or by any child of the individual who has not attained 18 years of age.

(C) ENERGY RELATED INDUSTRY.—For purposes of this paragraph, the term "energy related industry" means an industry engaged in the trade or business of—

(i) the generation, transmission, distribution, or sale of electrical or other energy,

(ii) the production, transmission, distribution, or sale of oil or gas, or primary products of oil and gas,

(iii) production, importation, distribution, or sale of motor vehicles, or

(iv) the furnishing or sale of transportation.

(2) TERMS.—

(A) Except as provided in subparagraphs (B) and (C), members shall be appointed for terms of 5 years.

(B) Of the members first appointed—

(i) one shall be appointed for a term of 1 year,

(ii) one shall be appointed for a term of 2 years,

(iii) one shall be appointed for a term of 3 years,

(iv) one shall be appointed for a term of 4 years, and

(v) one shall be appointed for a term of 5 years,

as designated by the President at the time of appointment.

(C) Any member appointed to fill a vacancy occurring before the expiration of the term for which his predecessor was appointed shall be appointed only for the remainder of such term. A member may serve after the expiration of his term until his successor has taken office.

(3) PAY AND TRAVEL EXPENSES.—

(A) Except as provided in subparagraph (B), members of the Board shall each be entitled to receive $100 for each day (including traveltime) during which they are engaged in the actual performance of duties vested in the Board.

(B) Members of the Board who are full-time officers or employees of the United States or Members of Congress shall receive no additional pay on account of their service on the Board.

(C) While away from their homes or regular places of business in the performance of services for the Board, members of the Board shall be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as persons employed intermittently in the Government service are allowed expenses under section 5703(b) of title 5 of the United States Code.

(4) CHAIRMAN.—The Chairman of the Board shall be elected by the members of the Board.

(c) DUTIES.—The Board shall review the expenditures made from the Trust Fund under section 312 and report to the Congress each year regarding expenditures so made during the preceding fiscal year. Such report shall contain evaluations of the programs and projects for which such expenditures were made, and such recommendations for such changes as the Board considers necessary to ensure that future expenditures made from the Trust Fund best carry out the purposes of this title.

(d) STAFF.—The Board shall appoint such employees as it deems necessary. Such employees shall be appointed subject to the provisions of title 5, United States Code, governing appointments in the civil service, and shall be paid in accordance with the provisions of chapter 51 and subchapter III of chapter 53 of such title, relating to classification and General Schedule pay rates.

(e) APPROPRIATION AUTHORIZATION.—There are authorized to be appropriated from time to time such sums as may be necessary to carry out the purposes of this section.

SEC. 314. REQUIREMENT OF ANNUAL AUTHORIZATIONS AND APPROPRIATIONS.

Amounts required for the purposes of this title (other than section 311) shall be established by annual authorization and appropriation Acts.

TITLE IV—ENCOURAGING BUSINESS CONVERSION FOR GREATER ENERGY SAVING

PART I—BUSINESS USE OF PETROLEUM AND PETROLEUM PRODUCTS

SEC. 411. EXCISE TAX ON BUSINESS USE OF PETROLEUM AND PETROLEUM PRODUCTS.

(a) IN GENERAL.—Subtitle D (relating to miscellaneous excise taxes) is amended by adding at the end thereof the following new chapter:

"CHAPTER 45—TAX ON BUSINESS USE OF PETROLEUM AND PETROLEUM PRODUCTS

"SEC. 4991. IMPOSITION OF TAX.

"(a) IN GENERAL.—There is hereby imposed a tax on each taxable use of a taxable petroleum or petroleum product.

"(b) AMOUNT OF TAX.—The amount of the tax imposed by subsection (a) shall be—

"(1) FOR NATURAL GAS.—In the case of natural gas—

"If the taxable use occurs during calendar year	The tax per 1,000 cubic feet is:
1977	4 cents.
1978	8 cents.
1979	12 cents.
1980 or thereafter	18 cents.

"(2) FOR CRUDE OIL AND OTHER PETROLEUM

PRODUCTS.—In the case of crude oil and other petroleum products—

"If the taxable use occurs during calendar year	The tax per barrel is:
1977	17 cents.
1978	33 cents.
1979	50 cents.
1980	67 cents.
1981	83 cents.
1982 or thereafter	$1.

"(c) LIABILITY FOR TAX.—The tax imposed by this section shall be paid by the user.

"SEC. 4992. DEFINITIONS AND SPECIAL RULES.

"(a) TAXABLE USE.—

"(1) IN GENERAL.—For purposes of this chapter, the term 'taxable use' means any use as a fuel in a trade or business other than a use described in paragraph (2).

"(2) CERTAIN USES EXCEPTED.—For purposes of this chapter, the term 'taxable use' does not include any use as a fuel—

"(A) in a vehicle, vessel, or aircraft,

"(B) in an apartment, hotel, motel, or other residential facility,

"(C) for the extraction of a mineral to the extent such extraction constitutes mining within the meaning of section 613 (c),

"(D) on a farm for farming purposes (determined in a manner similar to that provided by section 6420 (c)),

"(E) in a facility for the generation of electrical power if—

"(i) such facility is acquired by the user before January 1, 1976,

"(ii) the physical construction, reconstruction, or erection of such facility by the user is begun before January 1, 1976, or

"(iii) such facility is constructed, reconstructed, or erected for the user, or acquired by the user, pursuant to a contract which is on December 31, 1975, and at all times thereafter, binding on the user,

"(F) by an organization described in section 501 (c) (3) which is exempt from tax under section 501 (a) other than in an unrelated trade or business (as defined in section 513),

"(G) in the preparation process and drying, bleaching, dyeing, and printing and finishing processes for textiles, including carpets, and apparel products, and

"(H) in the process of melting, fining, feeding, conditioning, polishing, glazing, coating, annealing, or other industrial finishing of glass manufactured products.

Subparagraph (E) shall not apply to any use after December 31, 1981.

"(b) TAXABLE PETROLEUM OR PETROLEUM PRODUCT.—For purposes of this chapter, the term 'taxable petroleum or petroleum product' means any petroleum or petroleum product other than gasoline (as defined in section 4082(b)).

"(c) PETROLEUM AND PETROLEUM PRODUCTS.—For purposes of this chapter, the term 'petroleum or petroleum product' includes natural gas."

(b) CLERICAL AMENDMENT.—The table of chapters for subtitle D is amended by adding at the end thereof the following:

"CHAPTER 45. Tax on business use of petroleum and petroleum products."

(c) REPORT BY THE ADMINISTRATOR OF THE FEDERAL ENERGY ADMINISTRATION.—

(1) IN GENERAL.—The Administrator of the Federal Energy Administration (hereinafter in this subsection referred to as the "Administrator") shall conduct a study of the uses of petroleum or petroleum products (including natural gas) to identify—

(A) the industries or industrial processes where there is no economically feasible alternative to the use of petroleum or petroleum products,

(B) the areas of the country where conversion to the use of fuels other than petroleum or petroleum products is not feasible because of Federal, State, or local laws relating to pollution, and

(C) all other factors bearing on uses which should be exempted from the application of section 4991 of the Internal Revenue Code of 1954.

(2) REPORT.—Not later than June 1, 1976, the Administrator shall submit to Congress a report of his findings under the study conducted under paragraph (1), together with such recommendations as he may deem advisable.

(d) EFFECTIVE DATE.—The amendments made by subsections (a) and (b) shall apply to petroleum and petroleum products (as defined in section 4992(c) of the Internal Revenue Code of 1954) used after December 31, 1976.

PART II—AMORTIZATION FOR CERTAIN ENERGY-RELATED PROPERTY

SEC. 421. AMORTIZATION OF QUALIFIED ENERGY USE PROPERTY.

Part VI of subchapter B of chapter 1 (relating to itemized deductions for individuals and corporations) is amended by adding at the end thereof the following new section:

"SEC. 189. AMORTIZATION OF QUALIFIED ENERGY USE PROPERTY.

"(a) ALLOWANCE OF DEDUCTION.—Every person, at his election, shall be entitled to a deduction with respect to the amortization of any qualified energy use property (as defined in subsection (b)), based on a period of 60 months.

"(b) QUALIFIED ENERGY USE PROPERTY.—For purposes of this section—

"(1) QUALIFIED ENERGY USE PROPERTY.—The term 'qualified energy use property' means—

"(A) qualified waste equipment,

"(B) qualified shale oil conversion equipment,

"(C) qualified coal processing equipment,

"(D) a qualified coal pipeline,

"(E) qualified solar energy equipment, or

"(F) qualified deep mining coal equipment.

"(2) QUALIFIED WASTE EQUIPMENT.—The term 'qualified waste equipment' means any machinery or equipment (of a character subject to the allowance for depreciation)—

"(A) necessary to permit the use of waste as a fuel in a facility burning only waste or a combination of waste and oil as its principal fuel (including unloading equipment, feeding systems, and refuse-firing ports for waste fuels),

"(B) used to process waste into a fuel, or

"(C) used to sort and prepare solid waste for recycling or used for recycling solid waste.

"(3) QUALIFIED SHALE OIL CONVERSION EQUIPMENT.—The term 'qualified shale oil conversion equipment' means any machinery or equipment (of a character subject to the allowance for depreciation) necessary—

"(A) to reach the oil shale,

"(B) to extract the oil shale, or

"(C) to convert the oil shale into oil or gas.

"(4) QUALIFIED COAL PROCESSING EQUIPMENT.—The term 'qualified coal processing equipment' means any machinery or equipment (of a character subject to the allowance for depreciation) for processing coal into a liquid or gaseous state.

"(5) QUALIFIED COAL PIPELINE.—The term 'qualified coal pipeline' means a coal slurry pipeline or any other pipeline (of a character subject to the allowance for depreciation) for the transportation of coal from the mine or other gathering point.

"(6) QUALIFIED SOLAR ENERGY EQUIPMENT.—The term 'qualified solar energy equipment' means solar energy equipment, as defined in section 44B(c)(2).

"(7) QUALIFIED DEEP MINING COAL EQUIP-

MENT.—The term 'qualified deep mining coal equipment' means any machinery or equipment or structural component of a coal mine which is of a character subject to the allowance for depreciation and which is necessary—

"(A) to reach the coal,

"(B) to extract the coal, or

"(C) to bring the coal to the mouth of the mine.

Such term does not include any property used in the surface mining of coal.

"(8) COAL INCLUDES LIGNITE.—The term 'coal' includes lignite.

"(c) AMOUNT OF DEDUCTION.—The amortization deduction for any qualified energy use property shall be an amount, with respect to each month of the 60-month period within the taxable year, equal to the adjusted basis of the qualified energy use property at the end of such month divided by the number of months (including the month for which the deduction is computed) remaining in the period. Such adjusted basis at the end of the month shall be computed without regard to the amortization deduction for such month. The amortization deduction provided by this section with respect to any qualified energy use property for any month shall be in lieu of the depreciation deduction with respect to such property for such month provided by sec-

tion 167. The 60-month period shall begin, as to any qualified energy use property, at the election of the taxpayer, with the month following the month in which such property was placed in service or with the succeeding taxable year.

"(d) SPECIAL RULES FOR ADJUSTED BASIS.—

"(1) For purposes of this section, the adjusted basis of any qualified energy use property with respect to which an election has been made under subsection (e) shall not be increased for amounts chargeable to capital account for additions or improvements after the amortization period has begun.

"(2) The depreciation deduction provided by section 167 shall, notwithstanding subsection (c), be allowed with respect to the portion of the adjusted basis which is not taken into account in applying this section.

"(e) ELECTION OF AMORTIZATION.—The election of the taxpayer to take the amortization deduction, and the election to begin the 60-month period with the month following the month in which the qualified energy use property is placed in service or with the taxable year succeeding the taxable year in which such property is placed in service, shall be made by filing with the Secretary or his delegate, in such manner, in such form, and within such time as the Secretary or his delegate may by regulations prescribe, a statement of such election.

"(f) TERMINATION OF ELECTION.—

"(1) BY THE TAXPAYER.—A taxpayer which has elected under subsection (e) to take the amortization deduction with respect to any qualified energy use property may, at any time after making such election, discontinue the amortization deduction with respect to the remainder of the amortization period, such discontinuance to begin as of the beginning of any month specified by the taxpayer in a notice in writing filed with the Secretary or his delegate before the beginning of such month. The depreciation deduction provided under section 167 shall be allowed, beginning with the first month as to which the amortization deduction does not apply, and the taxpayer shall not be entitled to any further amortization deduction under this section with respect to such property.

"(2) CONSTRUCTIVE TERMINATION.—If at any time during the amortization period any qualified energy use property ceases to meet the requirements of subsection (b) or becomes property with respect to which an amortization deduction under this section is not allowable by reason of subsection (g), the taxpayer shall be deemed to have terminated under paragraph (1) his election under this section. Such termination shall be effective beginning with the month in which such

cessation occurs or in which a lease exists which causes disallowance under subsection (g).

"(g) NONCORPORATE LESSORS.—No amortization deduction shall be allowed under this section with respect to any property of which a person which is not a corporation is the lessor. In the case of property of which a partnership is the lessor, the amortization deduction otherwise allowable under this section with respect to such property to any partner which is a corporation shall be allowed notwithstanding the preceding sentence and subsection (f) (2). For purposes of this subsection, an electing small business corporation (as defined in section 1371) shall be treated as a person which is not a corporation.

"(h) LIFE TENANT AND REMAINDERMAN.—In the case of any qualified energy use property held by one person for life with remainder to another person, the deduction under this section shall be computed as if the life tenant were the absolute owner of the property and shall be allowable to the life tenant.

"(i) APPLICATION OF SECTION.—

"(1) IN GENERAL.—Except as provided in paragraph (2), the amortization deduction provided by this section shall apply to that portion of the basis which is attributable to construction, reconstruction, or erection after March 17, 1975, with respect to property which is

placed in service after such date and before January 1, 1981.

"(2) PRE-1981 PORTION.—In the case of property constructed, reconstructed, or erected by the taxpayer, or for the taxpayer pursuant to a contract which is binding on the taxpayer on January 1, 1981, and at all times thereafter, which is placed in service on or after January 1, 1981, the amortization deduction provided by this section shall apply to that portion of the basis which is attributable to construction, reconstruction, or erection before January 1, 1981.

"(j) CROSS REFERENCE.—

"For treatment of certain gain derived from the disposition of property the adjusted basis of which is determined with regard to this section, see section 1245."

SEC. 422. AMORTIZATION OF QUALIFIED RAILROAD EQUIPMENT.

Part VI of subchapter B of chapter 1 (relating to itemized deductions of individuals and corporations) is amended by adding at the end thereof the following new section:

"SEC. 190. AMORTIZATION OF QUALIFIED RAILROAD EQUIPMENT.

"(a) ALLOWANCE OF DEDUCTION.—Every person, at his election, shall be entitled to a deduction with respect to the amortization of any qualified railroad equipment (as defined in subsection (b)), based on a period of 60 months.

"(b) QUALIFIED RAILROAD EQUIPMENT DEFINED.—

"(1) IN GENERAL.—For purposes of this section, the term 'qualified railroad equipment' means equipment described in paragraph (2) of this subsection used by a common carrier engaged in the furnishing or sale of transportation by railroad and subject to the jurisdiction of the Interstate Commerce Commission if—

"(A) such equipment is—

"(i) used by a domestic common carrier by railroad, or

"(ii) owned and used by a car line company or a switching or terminal company at least 95 percent of whose stock is owned by one or more domestic common carriers by railroad, and

"(B) the original use of such equipment commences with the taxpayer after December 31, 1974.

"(2) EQUIPMENT.—The equipment referred to in paragraph (1) of this subsection is tangible property which is of a character subject to the allowance for depreciation provided in section 167 (not including a building or its structural components) if such property—

"(A) is used as an integral part of—

"(i) a communications, signal, or traffic control system;

"(ii) a rolling stock classification yard; or

"(iii) a facility for loading and unloading trailers and containers on and from railroad flatcars; or

"(B) is an improvement or betterment in track account.

"(c) AMOUNT OF DEDUCTION.—The amortization deduction for any qualified railroad equipment shall be an amount, with respect to each month of the 60-month period within the taxable year, equal to the adjusted basis of the qualified railroad equipment at the end of such month divided by the number of months (including the month for which the deduction is computed) remaining in the period. Such adjusted basis at the end of the month shall be computed without regard to the amortization deduction for such month. The amortization deduction provided by this section with respect to any qualified railroad equipment for any month shall be in lieu of the depreciation deduction with respect to such equipment for such month provided by section 167. The 60-month period shall begin, as to any qualified railroad equipment, at the election of the taxpayer, with the month following the month in which such equipment was placed in service or with the succeeding taxable year.

"(d) SPECIAL RULES.—

"(1) ADJUSTED BASIS.—

"(A) For purposes of this section, the adjusted basis of any qualified railroad equipment with respect to which an election has been made under subsection (e) shall not be increased for amounts chargeable to capital account for additions or improvements after the amortization period has begun.

"(B) Costs incurred in connection with a used unit of railroad equipment which are properly chargeable to a capital account shall be treated as a separate unit of railroad equipment for purposes of this section.

"(C) The depreciation deduction provided by section 167 shall, notwithstanding subsection (c), be allowed with respect to the portion of the adjusted basis which is not taken into account in applying this section.

"(2) METHOD OF ACCOUNTING FOR DATE PLACED IN SERVICE.—For purposes of subsections (a) and (e) in the case of qualified railroad equipment placed in service after December 31, 1974, and before January 1, 1980, the taxpayer may elect to begin the 60-month period with the date when such equipment is treated as having been placed in service under a method of

accounting for acquisitions and retirements of property which—

"(A) prescribes a date when property is placed in service, and

"(B) is consistently followed by the taxpayer.

"(e) ELECTION OF AMORTIZATION.—The election of the taxpayer to take the amortization deduction, and the election to begin the 60-month period with the month following the month in which the qualified railroad equipment is placed in service or with the taxable year succeeding the taxable year in which such equipment is placed in service, shall be made by filing with the Secretary or his delegate, in such manner, in such form, and within such time as the Secretary or his delegate may by regulations prescribe, a statement of such election.

"(f) TERMINATION OF ELECTION.—

"(1) BY THE TAXPAYER.—A taxpayer which has elected under subsection (e) to take the amortization deduction with respect to any qualified railroad equipment may, at any time after making such election, discontinue the amortization deduction with respect to the remainder of the amortization period, such discontinuance to begin as of the beginning of any month specified by the taxpayer in a notice in writing filed with the Secretary or his delegate before the beginning

of such month. The depreciation deduction provided under section 167 shall be allowed, beginning with the first month as to which the amortization deduction does not apply, and the taxpayer shall not be entitled to any further amortization deduction under this section with respect to such equipment.

"(2) CONSTRUCTIVE TERMINATION.—If at any time during the amortization period any qualified railroad equipment ceases to meet the requirements of subsection (d) (1) or becomes property with respect to which an amortization deduction under this section is not allowable by reason of subsection (g), the taxpayer shall be deemed to have terminated under paragraph (1) his election under this section. Such termination shall be effective beginning with the month in which such cessation occurs or in which the lease exists which causes disallowance.

"(g) NONCORPORATE LESSORS.—No amortization deduction shall be allowed under this section with respect to any property of which a person which is not a corporation is the lessor. In the case of property of which a partnership is the lessor, the amortization deduction otherwise allowable under this section with respect to such property to any partner which is a corporation shall be allowed notwithstanding the preceding sentence and subsection (f) (2). For pur-

poses of this subsection, an electing small business corporation (as defined in section 1371) shall be treated as a person which is not a corporation.

"(h) LIFE TENANT AND REMAINDERMAN.—In the case of any qualified railroad equipment held by one person for life with remainder to another person, the deduction under this section shall be computed as if the life tenant were the absolute owner of the equipment and shall be allowable to the life tenant.

"(i) APPLICATION OF SECTION.—This section shall apply to qualified railroad equipment placed in service after December 31, 1974, and before January 1, 1980.

"(j) CROSS REFERENCE.—

"For treatment of certain gain derived from the disposition of property the adjusted basis of which is determined with regard to this section, see section 1245."

SEC. 423. AMENDMENTS RELATING TO AMORTIZATION OF CERTAIN RAILROAD ROLLING STOCK.

(a) EXTENSION OF PERIOD DURING WHICH RAILROAD ROLLING STOCK MAY QUALIFY FOR 5-YEAR AMORTIZATION.—Section 184(e) (relating to amortization of railroad rolling stock) is amended—

(1) by striking out "1976" in paragraph (1) and inserting in lieu thereof "1980", and

(2) by striking out "January 1, 1976" in paragraph (7) and inserting in lieu thereof "January 1, 1980".

(b) CERTAIN COAL CARS AND RAILROAD FERRY VESSELS.—Subsection (d) of section 184 (defining qualified railroad rolling stock) is amended to read as follows:

"(d) QUALIFIED RAILROAD ROLLING STOCK.—Except as provided in subsection (e) (4), the term 'qualified railroad rolling stock' means, for purposes of this section—

"(1) rolling stock of the type used by a common carrier engaged in the furnishing or sale of transportation by railroad and subject to the jurisdiction of the Interstate Commerce Commission if—

"(A) such rolling stock is—

"(i) used by a domestic common carrier by railroad on a full-time basis, or on a part-time basis if its only additional use is an incidental use by a Canadian or Mexican common carrier by railroad on a per diem basis, or

"(ii) owned and used by a switching or terminal company all of whose stock is owned by one or more domestic common carriers by railroad, and

"(B) the original use of such rolling stock commences with the taxpayer after December 31, 1968;

"(2) any railroad rolling stock not described in paragraph (1)—

"(A) which is a car used by the taxpayer pre-

dominantly in the hauling within the United States of coal which is used (other than for resale) by the taxpayer in his trade or business, and

"(B) the original use of which commences with the taxpayer after May 7, 1975; and

"(3) any vessel—

"(A) which is used predominantly by the taxpayer in hauling railroad rolling stock between terminals located within the United States, and

"(B) the original use of which commences with the taxpayer after May 7, 1975."

(c) DENIAL OF AMORTIZATION TO NONCORPORATE LESSORS.—

(1) IN GENERAL.—Section 184 is amended by redesignating subsection (g) as subsection (h) and by inserting after subsection (f) the following new subsection:

"(g) NONCORPORATE LESSORS.—No amortization deduction shall be allowed under this section with respect to any property of which a person which is not a corporation is the lessor. In the case of property of which a partnership is the lessor, the amortization deduction otherwise allowable under this section with respect to such property to any partner which is a corporation shall be allowed notwithstanding the preceding sentence and subsection (e) (6). For pur-

poses of this subsection, an electing small business corporation (as defined in section 1371) shall be treated as a person which is not a corporation."

(2) CONSTRUCTIVE TERMINATION.—Paragraph (6) of section 184 (e) is amended by striking out "subsection (d) (1)" and inserting in lieu thereof "subsection (d) or becomes property with respect to which an amortization deduction under this section is not allowable by reason of subsection (g)".

(d) EFFECTIVE DATE.—The amendments made by this section shall apply to property placed in service by the taxpayer after May 7, 1975.

SEC. 424. TECHNICAL AND CONFORMING AMENDMENTS.

(a) COORDINATION WITH INVESTMENT CREDIT.—

(1) IN GENERAL.—Paragraph (8) of section 48 (a) (defining section 38 property) is amended by striking out "184,", and by inserting at the end thereof the following new sentence: "Qualified solar energy equipment with respect to which an election under section 189 applies shall not be treated as section 38 property."

(2) USEFUL LIFE.—The second sentence of section 46 (c) (2) (defining applicable percentage for purposes of determining qualified investment) is amended by striking out the period at the end thereof and inserting

in lieu thereof "(or, if the taxpayer has elected an amortization deduction with respect to the property, the amortization period)."

(3) EFFECTIVE DATE.—The amendments made by this subsection shall apply to property placed in service after March 17, 1975.

(b) CONFORMING AMENDMENTS.—

(1) Section 642(f) (relating to amortization deduction for estates and trusts) is amended by striking out "and 188" and inserting in lieu thereof "188, 189, and 190".

(2) Section 1082(a)(2)(B) (relating to basis in certain exchanges) is amended by striking out "or 188" and inserting in lieu thereof "188, 189, or 190".

(3) Section 1245(a) (relating to gain from dispositions of certain depreciable property) is amended by striking out "or 188" each place it appears in paragraph (2) and inserting in lieu thereof "188, or 189".

(c) CLERICAL AMENDMENTS.—The table of sections for part VI of subchapter B of chapter 1 is amended by adding at the end thereof the following:

"Sec. 189. Amortization of qualified energy use property.
"Sec. 190. Amortization of qualified railroad equipment."

PART III—TAX CREDIT CHANGES RELATING TO ENERGY CONSERVATION

SEC. 431. CHANGES IN INVESTMENT CREDIT RELATING TO INSULATION, SOLAR ENERGY, AND AIR CONDITIONING.

(a) INSULATION AND SOLAR ENERGY.—Section 48 (relating to definitions and special rules for purposes of the investment credit) is amended by redesignating subsection (k) as subsection (l) and by adding after subsection (j) the following new subsection:

"(k) TEMPORARY RULES FOR INSULATION AND SOLAR ENERGY.—

"(1) TREATMENT OF SECTION 38 PROPERTY.—Any—

"(A) insulation installed (other than pursuant to a reconstruction of the building) after March 17, 1975, and before January 1, 1978, in a structure which was in existence on March 17, 1975, and was used on such date in a trade or business (or held for the production of income) or

"(B) solar energy equipment installed after March 17, 1975, and before January 1, 1981,

shall be treated as section 38 property.

"(2) LODGING RULE NOT TO APPLY.—For purposes of this subsection, paragraph (3) of subsection (a) (relating to property used for lodging) shall not apply.

"(3) DEFINITIONS.—For purposes of this subsection—

"(A) INSULATION.—The term 'insulation' has the meaning given to such term by section 44A (c) (2).

"(B) SOLAR ENERGY EQUIPMENT.—The term 'solar energy equipment' means equipment—

"(i) which, when installed in or on a building, uses solar energy to heat or cool such building or provide hot water for use within such building and meets such criteria as the Secretary or his delegate shall by regulations prescribe;

"(ii) the original use of which commences with the taxpayer; and

"(iii) which has a useful life of at least 3 fixed years.

The Secretary or his delegate shall initially prescribe regulations under clause (i) not later than 2 years after the date of the enactment of this section.

"(4) TERMINATION.—This subsection shall not apply to —

"(A) amounts paid or incurred with respect to insulation after December 31, 1977, or

"(B) amounts paid or incurred with respect to solar energy equipment after December 31, 1980."

(b) AIR CONDITIONING, SPACE HEATERS, ETC.—Subparagraph (A) of section 48(a)(1) (defining section 38 property) is amended to read as follows:

"(A) tangible personal property (other than an air conditioning or heating unit), or".

(c) EFFECTIVE DATES.—

(1) The amendments made by subsection (a) shall apply to amounts paid or incurred after March 17, 1975.

(2) The amendment made by subsection (b) shall apply to property placed in service after the date of the enactment of this Act.

SEC. 432. GENERATING FACILITIES POWERED BY PETROLEUM AND PETROLEUM PRODUCTS.

(a) IN GENERAL.—Paragraph (1) of section 48(a) (defining section 38 property) is amended by adding at the end thereof the following new sentence: "Such term does not include any electrical generating property fueled by petroleum or petroleum products (including natural gas)."

(b) EFFECTIVE DATE.—

(1) IN GENERAL.—The amendment made by sub-

section (a) shall apply to property which is placed in service after April 17, 1975.

(2) BINDING CONTRACTS.—The amendment made by subsection (a) shall not apply to property which is constructed, reconstructed, erected, or acquired pursuant to a contract which was, on April 17, 1975, and at all times thereafter, binding on the taxpayer.

(3) PLANT FACILITY RULE.—

(A) GENERAL RULE.—If—

(i) pursuant to a plan of the taxpayer in existence on April 17, 1975 (which plan was not substantially modified at any time after such date and before the taxpayer placed the plant facility in service), the taxpayer has constructed, reconstructed, or erected a plant facility, and either

(ii) the construction, reconstruction, or erection of such plant facility was commenced by the taxpayer before April 18, 1975, or

(iii) more than 50 percent of the aggregate adjusted basis of all the property of a character subject to the allowance for depreciation making up such plant facility is attributable to either property the construction, reconstruction, or erection of which was begun by the taxpayer

before April 18, 1975, or property the acquisition of which by the taxpayer occurred before such date,

then the amendment made by subsection (a) shall not apply to all property comprising such plant facility. For purposes of clause (iii) of the preceding sentence, the rules of paragraphs (2) and (4) shall be applied.

(B) PLANT FACILITY DEFINED.—For purposes of this paragraph, the term "plant facility" means a facility which does not include any building (or of which buildings constitute an insignificant portion) and which is—

(i) a self-contained, single operating unit or processing operation,

(ii) located on a single site, and

(iii) identified, on April 17, 1975, in the purchasing and internal financial plans of the taxpayer as a single unitary project.

(C) COMMENCEMENT OF CONSTRUCTION.—For purposes of subparagraph (A) (ii), the construction, reconstruction, or erection of a plant facility shall not be considered to have commenced until construction, reconstruction, or erection has commenced at the site of such plant facility. The pre-

ceding sentence shall not apply if the site of such plant facility is not located on land.

(4) MACHINERY OR EQUIPMENT RULE.—The amendment made by subsection (a) shall not apply to any piece of machinery or equipment—

(A) more than 50 percent of the parts and components of which (determined on the basis of cost) were held by the taxpayer on April 17, 1975, or are acquired by the taxpayer pursuant to a binding contract which was in effect on such date (and all times thereafter), for inclusion or use in such piece of machinery or equipment, and

(B) the cost of the parts and components of which is not an insignificant portion of the total cost.

(5) CERTAIN LEASE-BACK TRANSACTIONS, ETC.—Where a person who is a party to a binding contract described in paragraph (2) transfers rights in such contract (or in the property to which such contract relates) to another person but a party to such contract retains a right to use the property under a lease with such other person, then to the extent of the transferred rights such other person shall, for purposes of paragraph (2), succeed to the position of the transferor with respect to such binding contract and such property.

The preceding sentence shall apply, in any case in which the lessor does not make an election under section 48 (d) of the Internal Revenue Code of 1954, only if a party to such contract retains a right to use the property under the long-term lease.

(c) QUALIFIED PROGRESS EXPENDITURES.—Nothing in the amendment made by subsection (a) shall be construed to deny any investment credit for qualified progress expenditures described in section 46 (d) of the Internal Revenue Code of 1954 for any taxable year beginning before April 17, 1975.

Passed the House of Representatives June 19, 1975.

Attest: W. PAT JENNINGS,
Clerk.

STATEMENT OF ELLIOTT M. ESTES, PRESIDENT AND CHIEF OPERATING OFFICER, GENERAL MOTORS CORP., ACCOMPANIED BY DR. HENRY L. DUNCOMBE, JR., VICE PRESIDENT AND CHIEF ECONOMIST, GENERAL MOTORS CORP.

Mr. ESTES. Thank you very much, Mr. Chairman.

I am Elliott M. Estes, president of General Motors Corp. With me today is Mr. Henry L. Duncombe, Jr., vice president and chief economist of GM. We are pleased to have the opportunity to testify on H.R. 6860, and particularly on title II, part I, that promises to have a profoundly adverse effect on the automobile buyers and the national economy.

In the interest of conserving time, I will read a summary of our full statement, and I request that the full statement appear in the record.*

The American consumer is just now beginning to see some signs of hope of economy recovery, and consumer confidence, as measured by national surveys, is beginning to increase. Yet the public remains cautious in two major respects: home buying and auto purchases. One contributing factor is the confusion about energy availability, energy prices, and national energy policy. For example, there have been conflicting news stories about whether or not people are going to be able to buy gasoline this summer. Also, there has been a wide range of figures quoted for future prices of gasoline. Obviously, people are not going to buy new cars if they are not sure they will be able to drive them.

Both the home building and automobile industries play important roles in national economic recovery and both industries are heavily influenced by consumer uncertainty. An additional reason for comparing them is that H.R. 6860 applies two quite different energy policy philosophies for these two industries. That is, while consumers use about 22 percent of the national energy in their residential structures, H.R. 6860 provides tax incentives for home insulation and storm windows. It does not impose an arbitrary or punitive limit on the size or fuel consumption of new homes, nor should it. In contrast, while consumers use about 13 percent of national energy for automotive transportation, H.R. 6860 establishes fuel economy standards that will, by 1981, result in substantial arbitrary restrictions on the types of cars that can be made available to the public.

The turmoil in the energy situation is bringing about drastic changes in the importance that people attach to fuel economy in automobiles. In order to meet the fuel economy demands of the public, GM has embarked on the most ambitious and costly new-design program in our industry's peacetime history. In all, General Motors plans to spend billions of dollars to provide the highest practicable fuel economy in cars of all sizes in the next few years.

Since the oil embargo ended some 14 months ago we have introduced six new smaller models, which, taken together, average better than 21 miles per gallon, sales weighted, on the EPA composite urban/highway test.

The 1975 model program is only the first stage in our efforts to meet the fuel economy demands of our customers. In the 1976 model

*See p. 172.

years, we will introduce America's smallest, most fuel efficient car. Still to come are programs to reduce the exterior size and weight of our larger cars while maintaining present levels of roominess and of comfort.

One result of our programs to provide consumers with improved fuel efficiency will be a major change in the weight classes of cars we will be offering in 1976 and later model years. Only about 20 percent of our current products are in inertia weight classes of 3,500 pounds and under, that is, a curb weight of about 3,000 pounds; by 1980, we expect these classes to account for more than 70 percent of our sales.

Looking at our full-size cars, about one-third of our total production in 1975 is in inertia weight classes of 5,000 pounds and up. By 1980 we expect cars of this weight class to represent a negligible percentage of our sales. We are taking weight out of virtually every car we build—at least 700 pounds from our full-size cars.

This drastic shift in the weight class of the cars we are building, along with changes in engines, reduced size engines, drivetrains and axles, improved aerodynamics and other fuel economy measures will, because of market demands, enable us to keep our commitment to the Federal Government to meet or exceed 53-percent improvement in the fuel economy of our cars between 1974 and 1980.

As a result of these fuel economy improvements, made in response to consumer demands brought about by higher gasoline prices, total gasoline consumption for all cars on the road will decline between now and 1980. The projected savings in oil, as estimated by the Federal Energy Administration, is 587,000 barrels per day by 1980. There is no other energy consuming sector of our economy that is approaching this negative energy growth. If there were, our country would be well on its way to solving its energy problems.

Why then do some people feel it is necessary to establish fuel economy standards for automobiles? Because of several misconceptions about the automobile market and automotive technology.

One of these misconceptions is that there is some magic new technology that we could use, if only we would, to achieve fuel economy improvements of 50 percent or more in a given car. I assure you, this is not the case.

Another aspect of the misconception about technological solutions is that European and Japanese manufacturers rely on superior technology to achieve fuel economy that is generally better than the fuel economy of the American cars. This is simply not true.

The high miles-per-gallon figures associated with some of the foreign cars result from the simple fact that they are smaller and lighter than any currently built American car. One needs only to examine the 1975 EPA fuel economy ratings and make a comparison between GM models and comparable imports to see that our technology is as good as any in the world. Note that in charts A, B, and C, which make up the last pages of this statement, in every weight class in which we compete, a domestic General Motors car ranks either at the top or near the top for fuel economy.

Our analysis of this legislation has indicated that it could cause a substantial loss of sales and jobs as early as the 1980 model year. Much more drastic consequences could be expected in post-1980 model years

as the standards jump an average of 1.5 miles per gallon per year to reach 28 miles per gallon in 1985.

The idea that General Motors can build the kinds of cars it wants to build, then use its advertising power to somehow make the American public want to buy those cars is a myth. This point was amply proven by the experience in car sales in the 1974 and 1975 model years. On the contrary, we try to put the kinds of cars on the market that the American people have indicated they want to buy. If we are required to meet standards that force us to build cars that do not conform with what the American people want to buy, they simply will not be sold and the entire economy will suffer.

H.R. 6860 mandates 20.5 miles per gallon for 1980, which represents a 68-percent improvement over General Motors' 1974 level of fuel economy—28 miles per gallon mandated for 1985 represents an improvement in fuel economy of 130 percent for GM. There is no evidence that such stringent fuel economy standards as called for in this legislation for the 1981–85 model years can be achieved without serious disruptions of the national economy and intolerable unemployment consequences.

The 1985, 28 miles per gallon, standard cannot be achieved through techological developments alone. It must be achieved by restrictions on the size and weight of cars that can be built. Beginning this fall General Motors, as I said, will offer a small, light, relatively low-powered vehicle that is smaller than the smallest subcompact car now being produced in the United States.

If we were required to meet a 28-miles-per-gallon standard for our entire production, the vast majority of our cars would have to be the size of the Vega and our new minicar or smaller.

If the American public cannot purchase vehicles that will be suited to their needs, many owners of larger cars are likely to keep them rather than trading them in on new, more fuel efficient cars. Thus, rather than conserving fuel, standards in the area of 28 miles per gallon would have the effect of perpetuating the use of less fuel efficient cars, and this would result in increased gasoline consumption, contrary to the purpose of the bill.

Mr. Chairman, I would like to turn now to comments directed specifically to the legislation before this committee, H.R. 6860. The Senate Commerce Committee also has reported out a bill, S. 1883, that would mandate stringent fuel economy standards. Most of our comments apply to that bill as well.

We believe it is a serious mistake for Congress to set standards by legislation, and the problems encountered with the Clean Air Act bear this out. There is widespread agreement that the automotive standard for NO_x in the Act was established in error, is not necessary to achieve air quality goals and blocks the introduction of alternate power plants. Yet Congress has not yet changed that requirement, despite the urging to do so by the Environmental Protection Agency nearly 2 years ago.

Section 212(c)(1) of the bill, as passed by the House, gives the Secretary authority to determine if an emission standards penalty exists for any model year compared to the fuel economy that would have resulted if the cars were required only to meet 1975 emission

standards. This section correctly recognizes that there is likely to be a fuel economy penalty associated with meeting future emission standards that are more stringent than current standards. This section fails to recognize, however, that emissions requirements on auto manufacturers are made more stringent not only by lowering the numerical standards but also by changes in test procedures and other regulations promulgated by the administrative agency.

Thus, unless section 212(c) provides for adjustment in the fuel economy standards for changes in emission regulations and procedures that adversely affect fuel economy as well as for changes in the emission standards, it will not be fully effective.

If this legislation is passed, there is likely to be conflict between the EPA and the auto manufacturers over determining the magnitude of the fuel economy penalty. Since the punitive penalty for a manufacturer of 4 million cars would be $20 million for each one-tenth mile per gallon below the standards, an accurate determination of the emission standards penalty could be of vital concern.

It is extremely important that this committee understand the relationship between legislation mandating fuel economy standards and legislation being considered by other committees of Congress that will establish the emission standards that the automobile companies will be required to meet in future model years. We have urged the Congress not to proceed with fuel economy standards until such time as congressional decisions on emission standards have been made.

There are a number of other specific provisions in the automotive standards section of H.R. 6860 on which General Motors would like to comment. In the interest of conserving time, however, I will not cover these in my oral testimony today.

In conclusion, General Motors currently is working as hard as it can to improve the fuel economy of its cars, and we plan to continue that effort on which we are spending billions of dollars.

A 53-percent improvement in the fuel economy of our cars in 5 model years, which we have committed to achieve under the voluntary program, represents a dramatic and unprecedented contribution to achieving the energy goals of the Nation. Automobiles account for only 13 percent of total energy use, and if similar improvements were made in other energy consuming areas that account for 87 percent of energy use, the energy crisis would soon end.

We recognize, of course, that it is not reasonable to expect as much conservation in other energy consuming sectors as will be achieved in the automotive sector. That is why our Nation's energy policy must include measures to increase production of energy as well as steps to conserve energy. We in General Motors, urge that the following steps be taken in addition to the voluntary passenger car fuel economy improvement program:

One, decontrol energy prices to encourage production and reduce consumption. Two, if free market actions are insufficient, impose a tariff on imported oil for the limited time needed to effect greater conservation. Three, impose a tax on gasoline and other motor fuels if price decontrol and import tariff are inadequate. Four, legislatively enact a program to monitor the automobile industry's progress toward meeting the 1980 fuel economy improvement goal and require periodic

reports to Congress. And five, continue the present 49-State vehicle emission standards through the 1981 model year.

We believe these measures represent a sound, well-balanced program that would make a significant contribution to achievement of the Nation's energy goals. We urge Congress to direct its attention to these areas rather than to fuel economy standards that could have a drastic negative effect on the well-being of Americans.

The CHAIRMAN. I am going to ask, in order that we might receive this in the proper context, and because we have full attendance at this moment, that we hear the statement in chief from the other three automobile manufacturers and that then we can direct questions at all three at the same time. I think that will expedite the procedure. So I will ask now that Mr. Fred Secrest, executive vice president of the Ford Motor Co. present the Ford statement, and then I will ask for the Chrysler statement, and then we will ask all three of you gentlemen to take the witness stand and field the questions.

STATEMENT OF F. G. SECREST, EXECUTIVE VICE PRESIDENT, OPERATIONS STAFFS, FORD MOTOR CO.

Mr. SECREST. Mr. Chairman, and members of the Senate Finance Committee, I am Fred Secrest, executive vice president of Ford Motors.

I have filed with the committee an 8-page statement and in the interest of time, I will read a condensed version.

The CHAIRMAN. Insofar as your statement merely repeats what Mr. Estes said, you could indicate that he has spoken for the two of you, and insofar as you have a different opinion, I think you ought to stress that part of it.

Mr. SECREST. I will try to do that, Mr. Chairman, although I just read Mr. Estes' statement a few minutes ago, so I am not certain that I can isolate for you the areas of difference if any, between our position and that of General Motors.

The CHAIRMAN. Well, you have got an old expert in testifying before the committee sitting behind you there, in Mr. Mark. If he would help, I think you can concentrate on the parts where you might be at odds with Mr. Estes.

Mr. SECREST. The bill before the committee, H.R. 6860, requires that motor vehicle manufacturers meet fuel economy standards beginning in model year 1978 at levels 32 percent higher than 1974 models. It provides severe fines for manufacturers whose average vehicle production does not meet these standards. It establishes even tighter standards for future years, culminating in a 28-mile-per-gallon average by 1985.

It is Ford Motor Company's conviction that fuel economy improvement is one area where there is no need for regulation. With gasoline at 57 cents a gallon in June, increases just last week of 3 to 5 cents a gallon, and potentially much higher prices, consumers do not need a law to force them to look for the best fuel economy. Compacts and subcompacts are currently running 57 percent of Ford's sales, compared with 41 percent in 1973.

Nor does the manufacturer need a law to force him to provide what consumers are demanding. A few weeks ago, Ford introduced eight new so-called MPG cars giving the customer a choice of several models that deliver 27 miles per gallon in the EPA combined metro/highway test, or 34 miles per gallon on the highway test alone. During the past 5 years, we have spent nearly $2 billion to develop new small cars and to expand our small car capacity. By 1980, we expect to spend an additional $2 billion on more efficient car designs and better fuel economy, through engine and drivetrain improvements and product downsizing. We expect Ford's 1976 model average fuel economy to be 3 miles per gallon, or more than 20 percent, better than this year. These changes are expensive, but we are making them because we must respond to the demands of the marketplace. The cost of mandating and deadlining these changes by Government regulation is likely to be very high, for several reasons.

First, conversion of facilities and redesign and engineering programs to meet the timetables indicated in this bill would be enormously expensive and disruptive. In the 6 months ending March 31, 1975, Ford had before-tax losses of over $200 million. As a result we have had to increase our borrowing substantially. While we, of course, anticipate a recovery from the present automotive depression, the losses will have a significant effect on our investment capability. Our present plans for fuel economy improvement, the $2 billion I mentioned, represent the maximum we can afford, and some other manufacturers may well prove unable to do this much.

Even with no limit on the capital available for investment, there would be a serious risk that a manufacturer might fail to achieve some of the standards under the rigid timetable prescribed in the bill. The risks include unpredictable variability of test results, wide variations in new car sales mix in response to consumers demands, which would change a manufacturers average car fuel economy, and the potential inability of the manufacturers to put together on the stated date all of the individual technical improvements that may be required to achieve the overall target. Failure, even briefly, or to a very minor extent, to meet the target for any of these reasons, would mean massive financial penalties. The consumer would pay the extra cost inherent in rush programs aimed at meeting arbitrary deadlines. And he would also pay at least some portion of any penalties.

Perhaps most importantly, the standards may discourage actions aimed at the real objective of the legislation, that is, continuing improvements in fuel efficiency for the entire car fleet. Changes made during a model year might not count at all for the purpose of measuring the average results. The introduction of high-risk advanced technology would be slowed because the penalty for failure would be so much greater than in a free market. Under a mandated standard, manufacturers would have to place their limited financial and technical resources almost entirely on sure things. Finally, the 28 miles per gallon standard could rule out efforts to improve the fuel economy of larger cars, forcing those owners who believe they have a genuine need for family sedans or station wagons to retain, as long as possible, their less efficient older models.

We believe that mandatory fuel economy legislation is unnecessary, that it could prove costly to consumers and that it would impose an

unnecessary and unreasonable burden on the domestic automobile industry. If Congress nevertheless believes that mandating fuel economy is essential, we would hope that any bill would have three important objectives: First, to accomplish the goal with the least possible interference in the marketplace and with minimum disruption to employment; second, to set standards that are technologically and financially achievable; and third, to assure the availability of vehicles adequate to meet the transportation needs of the people.

Further, the automotive fuel conservation goals should be consistent with whatever conservation actions may be mandated for other energy uses. Accordingly, if such legislation is deemed necessary, we strongly urge the following modifications to H.R. 6860.

First, delete the 28 miles per gallon standard for 1985. It seems probable that a 28 mile per gallon average cannot be achieved by 1985 across the range of vehicles presently demanded and needed by a large segment of the U.S. market. Only 10 of the 320 passenger cars listed in the 1975 EPA Buyer's Guide achieve a Metro/highway average of 28 miles per gallon or better. All 10 of these are imports and all except the Peugeot diesel are in the 2,500 pound weight class or lighter. A manufacturer could hardly make long-term investments in more efficient full-sized vehicles, because even with improvement of 50 percent or more, they still may not come close to the 1985 standard. The six-passenger sedan and the station wagon would disappear from the new-car market. Such a standard would require a total restructuring of the industry, including the writeoff of billions of dollars worth of facilities. Major unemployment would be unavoidable during the long transition period. Further, domestic vehicle prices would have to reflect the enormous cost of this facility conversion; while most foreign manufacturers, who are already building 2,500-pound cars for their home markets, would have considerably less task and cost.

We believe, therefore, that a standard at this level would turn over a further large share of the market to the imports, with, of course, severe effects on U.S. jobs and the balance of payments.

The flexibility given to the Secretary of Transportation to modify the 28 miles per gallon goal would not resolve this problem. Product and facility plans would have to be based on the statutory standard until a determination of modification was made in 1979 or later. Any modifications would probably come only at the last minute.

There is no doubt that continued improvement in automotive fuel economy is necessary and possible after 1980. We believe that this improvement will occur as a result of market forces, and that by 1980 it will become obvious that a costly regulatory structure is not needed to achieve the goal. If Congress wishes to assume a continuing need for regulation, however, it should authorize the administering agency to set post-1980 fuel economy standards only after careful assessment of technological and financial feasibility; a thorough analysis of consumer needs; analysis of the impact on safety; and reassessment of the Nation's energy requirements and supplies. There is simply no basis today for mandating a standard of 28 miles per gallon or any other number for a period that is 10 years away. Second, we believe the penalties must be modified. The level of penalties in H.R. 6860 is exorbitant and could be considered confiscatory.

If Ford should achieve an average fuel economy of 19 miles per gallon in 1980, the shortfall of 1.5 miles per gallon or only 8 percent from the proposed statutory standard would result in a civil penalty of about $225 million, equivalent to before-tax profits of $450 million. Our dividend payments, at an annual rate, are $225 million a year today. Fines of this magnitude would deprive manufacturers of needed funds to make heavy investments in conversions and fuel economy technology. In fact, such huge contingent liabilities would, in our judgment, seriously jeopardize our company's ability to raise the capital funds needed to attain major fuel economy improvements. In view of our concern about the effect of these provisions on how investors and lenders would evaluate the industry's securities, we suggest that the committee might wish to seek testimony from Government and private experts on the subject.

There are a number of ways in which the penalties could be moderated, such as use of the production-weighted average application of the penalty only to those cars not meeting the standard, which I think is essentially the suggestion made by Mr. Estes; reduction of the dollar amount of the penalty; provision that the maximum penalty should not exceed some stated percentage, perhaps 10 to 25 percent of a manufacturer's profit; or making the penalty tax deductible. Such changes could still result in potential penalties that would assure maximum effort to avoid them, without the shattering consequences of shortfall under the schedule set forth in 6860.

Third, we believe that any requirements for truck fuel economy standards should be deleted. The lowest operating cost is a prime objective for truck operators, and fuel economy is therefore an especially important purchasing criterion for trucks. Trucks are designed primarily to haul goods. A reduction in truck size which might be required to meet fuel economy standards would not necessarily result in an overall reduction in fuel consumption, if more trips would be needed to carry the same amount of goods.

Further, today there are no EPA data indicating the average fuel economy of the Nation's new truck fleet, because EPA's testing methods for many trucks do not yield meaningful fuel economy figures. The wide variety of truck usage patterns, loading conditions and vehicle configurations have dictated engine only rather than vehicle testing.

And fourth, permit inclusion of cars presently imported by the manufacturer in overall fuel economy average. As initially proposed in the House by Representative Sharp, each manufacturer would have determined an import base equal to his imports in 1973 or 1974 as a percentage of the total vehicles sold by him in those years. This import base would be included in determining the manufacturer's average fuel economy in future years. The House, however, accepted a substitute provision requiring that all imports, except from Canada, be excluded in determining a manufacturer's basic fleet-average fuel economy.

The provision as originally proposed would clearly prohibit a manufacturer from initiating so-called runaway-plant actions in order to achieve the fuel economy standard. We think this original provision seemed to be a reasonable safeguard, and we urge its incorporation.

We are gratified that the House, in H.R. 6860, has recognized that there must be adjustments for the fact that, for any given vehicle and powertrain, tighter emission controls means a loss in fuel economy.

And finally, we want to emphasize that the singlemost helpful thing that Congress could do to improve automotive fuel economy would be to act to defer any further tightening of emission standards and retain the already-stringent present standards for 5 additional years. The President has recently recommended such a deferral, based on an analysis indicating substantial fuel economy degradation in moving to the 1978 statutory levels. I must stress that as an absolute prerequisite for the degree of fuel economy improvement envisaged by this bill between now and 1980 is a freeze in emission standards at or near today's levels.

Mr. Chairman, we are preparing a copy of H.R. 6860 with specific amendments to accommodate these suggestions we have made today that would, in our judgment, remedy the serious problems I have discussed and clarify and improve the bill with respect to a number of technical details.

We have also included some additional suggested minor amendments, together with their rationale that time restraints have not permitted me to cover today. I request permission to file his document for the record.

Senator TALMADGE [presiding]. Without objection. it is so ordered.* Mr. Secrest, if you will file those suggested amendments, the committee will give it consideration.

Thank you sir.

The next witness is Mr. A. G. Loofbourrow, vice president of engineering, the Chrysler Corp.

STATEMENT OF ALAN G. LOOFBOURROW, VICE PRESIDENT, ENGINEERING, CHRYSLER CORP.

Mr. LOOFBOURROW. Thank you, Mr. Chairman. Because of the limited time available to me, I would like to state our position briefly, and to submit for the record a more complete statement describing the engineering considerations involved in improving gasoline mileage, and the drawbacks to legislative solutions to the problem.

Senator TALMADGE. You may submit your full statement for the record. We would be delighted to have it, sir.

Mr. LOOFBOURROW. Thank you, sir.

In our view, this legislation is unnecessary. It poses a serious threat to the economic health of the automobile industry, its thousands of supplier industries, and to many thousands of their employees.

It imposes unnecessary and arbitrary restrictions on the freedom of choice that has been a critical force in the success of the free market system. Discriminatory legislation that effectively outlaws larger cars would unfairly penalize individuals and families who require these vehicles, and would limit the size and number of motor vehicles manufacturing operations in this country.

Such drastic measures in the name of fuel conservation would appear to be obviated by the fact that Chrysler and other manufac-

*See p. 189.

turers have already pledged to improve fuel economy of their fleets by 40 percent by the year 1980.

That represents a savings of more than 487 million barrels of crude oil a year by 1980. A comparable improvement by all other users of petroleum products would result in savings of additional hundreds of millions of barrels of crude oil annually.

In recognition of these facts, the President of the United States has recommended that Congress hold automotive emissions standards at their present very strict levels, since any additional tightening of those standards must inevitably impede our efforts for greater fuel economy.

Chrysler vehicles meeting today's California standards, for example, incur a 12 percent penalty compared with comparable vehicles meeting Federal standards. More stringent standards necessarily produce larger penalties. No law, no tax or civil penalty program, and no crash research development project can change that basic engineering fact of life.

Despite the technical problems posed by today's stringent emissions standards, we have improved the fuel economy of our 1975 fleet by 15 percent over 1974.

This industry does not need standards or taxes or any other artificial incentive to provide better gasoline mileage. We already have the strongest incentive a free economy produces—the demand of our customers. We do not need a law to echo what we hear in the marketplace.

At Chrysler we are now developing ways to meet today's stringent emissions standards while at the same time improving fuel economy through precise electronic control of the engine's operation.

As a result of technological improvements and the shift in mix to small cars we are confident we can reach the goal of a 40 percent improvement in fuel economy on a sales-weighted basis by 1980.

Our mutual objective—reduced fuel consumption—might better be met by revising existing laws, rather than writing new ones.

The automobile industry is inundated with contradictory, mutually exclusive standards that work against improved fuel economy. A multitude of safety standards that have practically no identifiable benefit add hundreds of pounds to a car's weight and seriously penalize gasoline mileage. Proposed emissions standards could lead to fuel-economy penalties of 30 percent. Proposed noise and damageability standards could cause additional penalities.

I think we all know from experience in both government and industry that you cannot legislate a technical breakthrough or solve a problem by simply throwing money at it.

Technological progress usually requires careful and painstaking work. There are rarely dramatic solutions to our problems. To help reach the President's 40 percent goal, we are taking a number of actions in addition to developing electronic controls for engine timing, fuel distribution, and other engine operations.

These modifications include reducing vehicle weight, improving aerodynamics, lowering axle ratios, improving transmissions, reducing brake drag, lowering idle speeds, and reducing rolling resistance. None of these sound very exciting by themselves, but taken together, they can produce significant improvements in gasoline mileage. We are also

planning new lines of smaller, lighter, more fuel efficient cars over the next few years. The first of these new cars will be available this fall, and will sell alongside our present line of compacts.

New laws in the form of fuel economy standards won't get us back the mileage we have already lost, and won't prevent additional losses if safety and emissions standards are needlessly tightened.

We urge this committee not only to reject additional and unnecessary fuel-economy standards, but also to recommend a 5-year freeze on present standards so that we can attain our promised 40 percent improvement by 1980.

As I have said, the industry is still doing what it always has done—responding to the demands of the marketplace, and the requirements of our national objectives.

And I believe that we can continue to advance toward the objectives of better fuel economy, environmental protection, and safe and economical transportation.

All we ask is that Government establish clearly ordered priorities on the basis of the engineering realities of technological feasibility and the economic realities of cost-benefit studies.

Thank you.

Senator TALMADGE. Thank you very much, sir.

Now, Mr. Estes, if you and Mr. Secrest will join Mr. Loofbourrow at the witness table, we will propound questions to any of you. And without objection, we will restrict the round of interrogations to 10 minutes per Senator. If any Senator desires more time than that, we will provide a second and if need be a third and fourth round, as many rounds as necessary. Is that agreeable to the committee? Without objection, it is so ordered.

Senator CURTIS. Mr. Chairman.

Senator TALMADGE. Senator Curtis.

Senator CURTIS. I would like unanimous consent to insert an opening statement in the record following the statement made by the Chairman.

Senator TALMADGE. Without objection, so ordered.[1]

Gentlemen, as all of you know, we have a crisis in imported petroleum. Domestic reserves are decreasing and the OPEC nations have quadrupled the prices for imported petroleum. And last year we paid about $25 billion for imported petroleum. There is just no way on Earth that we can earn the foreign exchange to do that.

Now, the President has suggested making fuel so expensive that the price will ration the product itself. And that seems to be the thrust of Mr. Estes paper that he submitted, as I saw it.

But I think Congress is unwilling to buy that. If you take for example, the community where I live, 25 miles south of Atlanta. Virtually all of my neighbors work in Atlanta. That means a 50-mile round trip daily for gainful employment. A lot of them work in the Ford plant, some in the General Motors assembly plant, Delta Air Lines, Eastern Airlines, things of that nature. They all are working people. And if they have to pay 75, 80 cents or a dollar a gallon for gasoline, it will place an intolerable burden on those people. They would probably have to move back to town, dispose of their homes, or something of that nature.

[1] See p. 1.

And you have some similar situations throughout the country. Ours is pretty much a mobile society today. And since you gentlemen are manufacturers of principle automotive products in this country, you know it better than I. Our people are addicted to automotive transportation.

So some action is going to be necessary to limit the imports of petroleum and to convert to coal and other resources that we have in this country in great abundance.

As I recall, about 17 million barrels of petroleum is used daily in America. Is that about right.

Mr. ESTES. Something like that.

Senator TALMADGE. How much of that goes into gasoline or automotive transportation?

Mr. ESTES. About 13 percent.

Senator TALMADGE. Only 13 percent of petroleum? Now, you stated 13 percent in the energy needs.

Mr. ESTES. Thirteen percent of total energy, about 30 percent of petroleum.

Senator TALMADGE. Thirty percent of petroleum goes into production of gasoline or automotive transportation.

Mr. ESTES. Right.

Senator TALMADGE. So we are talking roughly about what? Five million barrels of petroleum daily?

Mr. ESTES. Five or six.

Senator TALMADGE. Automotive propulsion on that order——

Mr. ESTES. Five to six, that is right.

Senator TALMADGE. Five to six million barrels daily.

Now, I think you make good arguments in your paper about trying to enforce technology by law. I doubt that that is possible.

How does your product compare with some of the best engineered German products, I guess a Cadillac and a Mercedes and what do they call it, Bavarian Motor Works over there in Germany, they are all about——

Mr. ESTES. BMW.

Senator TALMADGE. They are about equivalent aren't they?

Now I believe you got some good mileage on your new Cadillac Seville. What do you get per mile, per gallon on it?

Mr. ESTES. It is 17.2 on a weighted average between the two EPA runs, 55 percent city, 45 percent highway that the EPA has determined, 17.2. It happens to be the highest fuel economy of any foreign or domestic 4,500 pound car being sold in the United States today, according to EPA numbers.

Senator TALMADGE. What does Mercedes get?

Mr. ESTES. Mercedes on a comparable basis is about 13.

Senator TALMADGE. In other words, you are doing better than the Germans are in that regard.

Mr. ESTES. By a considerable amount. Now, Mercedes has a diesel engine. And to be fair to the committee, the diesel engine, I think on the same basis, gets about 24. But, their gasoline engines are considerably poorer in fuel economy than our Seville.

In fact, as I said in my statement, if you will examine the EPA in any weight class in which General Motors competes, and we do not compete below 2,750 pound weight class this year—we are going to

next year—in any weight class, we are getting the highest fuel economy in the General Motors cars of any cars in those weight classes, including the foreign vehicles.

Senator TALMADGE. What about the Bavarian Motor Works?

Mr. ESTES. I cannot tell you specifically. We can check it. But we are leading in every single weight class.

Senator TALMADGE. Do you have your tables that give the Bavarian Motor Works. Someone told me they got excellent mileage.

Mr. ESTES. We will have to check. BMW gets 19 in the city and 30 on the highway and one of their jobs, 14 and 21. But we need to get the composite number that we are talking about. But, in any given weight class, we will beat a BMW at the same weight.

Senator TALMADGE. I got the thrust from all of your testimony that without technological breakthroughs the principle way you could get better gasoline mileage would be to reduce the size and weight of your automobile. All of you agree on that.

Mr. ESTES. Really, I think the committee should know that there are a number of ways of improving fuel economy. But when we talk about improved technology in engines and transmissions and axles, we are talking about tenths of a mile per gallon from our current levels with any known technology.

On the other hand, when we reduce the weight of a vehicle by 1,000 pounds, we save 20 percent in fuel economy. When we reduce the performance of a vehicle, and let us say that our average vehicle in the United States today has a performance level zero to 60 of 15 seconds, if we reduce that to 20 seconds—that happens to be the minimum—as far as fuel consumption is concerned, we only gain 6 percent.

So our program to reduce weight in all of our vehicles is the most efficient way to improve fuel economy and the fastest. I would like to take this opportunity, however, to tell the committee that maybe the most important thing, since our vehicles may be the most postponable product in the market today, that we have got to be sure that whatever that car is, each new model, it adequately and more effectively serves the transportation needs of our customer, or he will keep his current car. And that has been demonstrated in the last 2 years, I think very, very effectively.

Senator TALMADGE. You have touched on a point that I myself have had some experience in, Mr. Estes. When we had the Arab boycott I decided to get real patriotic, and I have been a faithful customer of General Motors there in Atlanta for many, many years. Specifically John Mitchell's Oldsmobile dealership.

Mr. ESTES. We want to keep it that way, Mr. Chairman.

Senator TALMADGE. Thank you, sir. I had been driving an Olds 98 so I got the smallest Cutlass I could find. My 98 was 6 years old. It had relatively no trade in value.

I have to go home quite frequently. So I took my 98 home and had it fixed up to where it would run. And it does still perform magnificently, I may say. But I get 15 miles to the gallon on my 98 that is now 7½ years old and I get 12 miles to the gallon on my Cutlass that is 1½ years old. Now what caused that drastic reduction in mileage even for newer and much smaller and lighter weight automobiles.

Mr. ESTES. Unfortunately the technology that was available to our industry to improve emission levels and reduce the emission levels to statutory standards through the last years and specifically between 1969 and 1974, and I assume your Cutlass was a 1974, because if it had been a 1975 you would be beating that 1969 job. During that period, we lost, as an industry average, or at least in General Motors sales weighted about 16 percent in fuel economy with the technology we were using to meet the emission standards during that period.

In 1975, due to what we feel is the real accomplishment—that is the development of what I call garbage disposal for emissions: the catalytic converter—we were able to go back and retune the engines to improve and get back that 16, 17 percent that we lost, plus a little bit more fuel economy.

So, now, if you will just trade that Cutlass in for a 1975 Cutlass, you will beat the 1969 job. And you will get anxious to buy a 1975 Oldsmobile 98 at the same time.

Senator TALMADGE. Are you saying that Congress is responsible for that reduction in mileage now by emission standards that we imposed on you?

Mr. ESTES. Well, I guess, maybe you have to assume some of the responsibility. Maybe we have to assume some of the responsibility for not developing the catalytic converter earlier to prevent that decrease in fuel economy during that period.

But we have made a dramatic improvement. In the General Motors case, according to EPA numbers we are 28 percent better in 1975 than we were in 1974, sales weighted.

It is a dramatic improvement. Our concern, I guess, now, is that we do not want to lose that with some further tightening of the standards until some new technology comes along that is going to give us another improvement of that type.

Senator TALMADGE. Thank you. My time has expired, Mr. Estes. And following Senator Long's early bird rule, I believe Senator Haskell is the next to interrogate the witnesses.

Senator Haskell is recognized.

Senator HASKELL. Thank you, Mr. Chairman.

All of you gentlemen seem to concur with the President's 40 percent voluntary improvement. To what base does the 40 percent apply?

Mr. Estes?

Mr. ESTES. I am sorry.

Senator HASKELL. You apparently concurred with President Ford's voluntary 40 percent improvement. All of you testified that it was satisfactory. I am just curious as to what figure that 40 percent is applied.

Mr. ESTES. That figure is applied to the sales weighted 1974 industry number, that was developed on a basis——

Senator HASKELL. What is the industry number?

Mr. ESTES. The industry number was 14 and the industry 40 percent improvement is 19.6. Our General Motors number on the same basis was 12.2 in 1974. We go to 18.7, the General Motors portion of that improvement is 53 percent.

Senator HASKELL. You have testified, Mr. Estes, that your new Cadillac gets 17. You also testified you are bringing out a line of cars, six models I believe you said, that obtain 21 miles per gallon.

Mr. ESTES. They are already on the street, Mr. Senator.

Senator HASKELL. You folks can do it. And yet, at the same time, Mr. Estes, you said that it would be a dreadful thing to force you by statute to arrive at a certain level because it would have an adverse impact on sales. Where would those sales disappear to? Would Ford get them? Would Chrysler get them? Would the Mercedes get them? What would happen to them?

Mr. ESTES. Senator, I think I stated a while ago and I think our history backs us up, that we are selling a postponable product. Our average buyer has a 2½-year-old car. The life of the car is 10 years.

So, he has no incentive rather than a better product or better serving his need to buy a new car this year, he can wait till next year, he can wait 2 years, he can wait 3 years, he can wait 4 years. And the poor person that gets hurt in this is the very person we do not want to be hurt. And that is the person that is buying a used car.

Last year there were 34 million cars sold in the United States. The last 2 years of the life of the car, that is great transportation sold for between $400 and $800 currently. And the poor individual that we are worrying about most, the low-income buyer, is the person that is going to get hurt in this. Not the buyer of the new car, he can drive it 4 more years without any problem.

Senator HASKELL. If this is the case, if it would postpone the purchase of new cars from General Motors when they begin making only lightweight, better mileage cars, how do you account for the dramatic increase in sales of imported cars?

Mr. ESTES. First, I would like to say that our program contemplates a big improvement in fuel economy and what we think is a maximum reduction in weight and size of our vehicles and still keep the buyer interested, because there is not any question that energy is going to be more expensive in the future. It has to be, and we have to conserve. We think our program——

Senator HASKELL. What troubles me, Mr. Estes, is you say that coming up to these standards is going to hurt your sales. Yet, at the same time, over the past 5 years the foreign cars have made a tremendous impact and have cornered 20 percent of the U.S. market.

Mr. ESTES. Let me respond to that in a moment. In actual numbers, the foreign car sales have not increased that much. I think this year foreign cars are being sold at an annual rate about 1.4, 1.5 million, and that is not abnormal.

The problem is that our buyers have been postponing the purchase of our cars and the domestic market has gone down so that the percentage has gone up. But, in actual numbers, their volume is not a great deal higher than it was in the past.

Senator HASKELL. But, their volume is holding up and yours is not.

Mr. ESTES. That is right. it is holding even, that is true: 56 percent of the foreign cars being sold today we do not compete with. They are lighter, they are 2,000 pounds curb weight or lighter. That is the reason we are responding in 1976 with a car that hits them right square where they hurt the most and that is right in the fuel economy area.

Senator HASKELL. I guess, Mr. Estes, my question is, why did you not you do this earlier? I cannot quite get it through by head why making a lighter, more fuel-efficient car is going to ruin sales. It may postpone, I guess, a few sales.

I cannot see your logic. I feel the way the chairman does. You cannot ration by price and be fair to people in this country. So, we must do something.

General Motors has gone a long way, I gather, perhaps a little further than Ford and Chrysler. But I cannot see the reason for delaying what you can already do technologically. You can bring it up to 21 miles a gallon. You have shown that.

Mr. ESTES. No question about it and we can bring it to 28 miles to the gallon, and we are going to do that next year. It is going to be a four-passenger vehicle with limited luggage space. It weights 2,000 pounds. We can do that. This is all a matter of degree. We are going to reduce the size and the weight of every single one of our vehicles but we are going to maintain the transportation characteristics of that car as far as six passengers, a load of luggage, a dog and cat, to go on a vacation.

So this poor fellow that can only afford one car and does not want to take two cars to the airport to get his family, we are still going to maintain that vehicle but we are going to take up to 1,000 pounds out of that vehicle to improve his fuel economy and get our 18.7 average. We are still going to satisfy the customer. We are going to have a car that meets the 28 miles to the gallon next year. But we are guessing, and we may be wrong, that we can sell 225,000 of those vehicles next year against the imports.

The total market——

Senator HASKELL. I think that is just great.

Mr. ESTES. The total market of a 28-mile-per-gallon vehicle, I think Mr. Secrest mentioned, there are 16 models today. There are really only about three that have any volume. The total volume today is about 600,000 to 700,000 of the 28-mile-per-gallon vehicle. We are going after that market—with 225,000 vehicles.

But to try to sell 4 million of those we think would be an impossibility in 1976. If the market will support that, I will assure you we will move as fast as we can to do it, but it is going to take a tremendous expenditure.

Actually, right now, we have more capacity for small cars than we can sell and we are doing everything possible to sell them. If anybody on the committee has any ideas how we can sell more fuel-efficient cars today, I assure you we will build them. We will build them in a helluva hurry.

Senator HASKELL. I think that is just great, Mr. Estes, but I still cannot understand why you folks object to these levels. I may have some questions next time around, Mr. Chairman.

Mr. ESTES. Did I not answer your question adequately?

Senator HASKELL. You sure did, you sure did, yes, sir, you did. But you have proved to me that you folks can get these levels.

Mr. ESTES. We can build them but we cannot sell them. Now, you tell us how to sell them.

Senator HASKELL. How do the foreigners sell them?

Mr. ESTES. They only sell 700,000, we are trying to sell 4 million vehicles to keep our people working. We can build those small cars in two plants. We have 26 plants we are trying to keep running—26—and all we say is we think we have got to move as far as we can in the

area of fuel efficiency and still be able to satisfy the needs of that customer or he will keep that car another 5 years.

And if he does, we are going to have massive unemployment, even twice as bad as we have had in the past year due to postponing of buying. I think this is the point we are really trying to explain; that it is a characteristic of our business, right or wrong, good or bad.

Senator HASKELL. You really feel that somebody could postpone buying a car 5 years?

Mr. ESTES. During the war they postponed 5 years, everyone got where they wanted to go. We were talking about it this morning, I guess the scrappage rate was negative.

You know, they pulled cars out of the junk heap, put wheels on them, and used them for transportation.

But in a reasonable sense, our vehicles, the average life of our vehicle is 10, 11 years and the poor fellow that gets hurt is the fellow trying to buy transportation for $800. And we do not know how to furnish him transportation any other way except through our current process that has been developed over the years of the new buyer giving him a better product so that he in turn buys it.

There is an average of three and a half sales per vehicle during its life.

Senator HASKELL. Mr. Secrest, do you have something to add to that?

Mr. SECREST. I wanted to see if it would help Senator Haskell to make this observation. I think we share your view. I do; that the market forces are operating in such a way as to make it probable that people who offer fuel-efficient cars will sell well and people who fail to do so will not sell well.

Our internal target at Ford calls for, by 1980, a production weighted or sales weighted, fleet average fuel economy that is substantially better than that of today—in the range of 45 to 50 percent, reasonably consistent with levels suggested in this bill.

My concern is that the bill takes a voluntary commitment by an industry and says, well, if you say you can do it and if we all agree it is a good thing, we will write a law and if you miss by, say, 8 percent, we will fine you $225 million. It is that that concerns me. I think that a potential contingent liability of anywhere near that magnitude would seriously hamper the ability of Ford, at least, to carry out the kind of program we are planning because I think that with that sort of punitive fine hanging over your head for a shortfall that could be due to any one of four or five factors that would not have to be very great, it would be difficult to sustain the capital investment program to carry out our plan.

And that is what I see as a penalty. That is embodied in an insistence to do by law what the market ought to be forcing us to do.

Senator HASKELL. My time is up, Mr. Chairman.

Senator TALMADGE. Senator Packwood?

Senator PACKWOOD. In a normal year, how many new cars are sold in Europe?

Mr. ESTES. About 8 million.

Senator PACKWOOD. And I assume most of those are smaller cars by our definition?

Mr. ESTES. Yes.

Senator PACKWOOD. I am curious, in each of your statements you have referred to the needs or what the average citizen requires in this country. How do you needs differ from what the average European needs?

Mr. ESTES. Well, the major difference, I think, is distance. Distances in Europe are considerably shorter, roads are smaller, it is much more difficult with regard to back roads and so on. And then, of course, the other thing you have to remember is that the price of fuel in Europe for years has been in the direction of improved fuel economy; whereas in the United States, I guess you would have to say that we have had artificially lower fuel costs which obviously is not an incentive to buy a smaller, more efficient car.

Senator PACKWOOD. But for the moment, I do not want to get on to wants, because maybe if Europeans had 25 cents a gallon gasoline and big roads, they would want big cars.

Is there any reason an American needs a big car? Isn't a 28-mile per gallon station wagon sufficient for me and my wife and my dog and kids to get around?

Mr. ESTES. A 28-mile-per-gallon station wagon? It would be mighty tight—you and your wife and a dog. We have 23 percent of our families in the United States, maybe 30 percent, I am talking about mainly automotive customers. that have five people or more in their family.

Senator PACKWOOD. But how big a car do they need?

Mr. ESTES. They need a car that will carry five, maybe six people, grandmother wants to go, six people and some luggage to go on a vacation.

Senator PACKWOOD. And there are no 28-mile per gallon sedans that would do that?

Mr. ESTES. No, sir, foreign or domestic—diesel, yes.

Senator PACKWOOD. I understand. I meant gasoline.

Mr. ESTES. I think here in our context, we have to exclude the diesel. The Mercedes diesel on the basis that we are talking about is between 26 and 27 miles per gallon, and it is a 3,500-pound car. That is the car you are talking about, 3,700 pounds. But that same car with a gasoline engine is in the 17 to 18 area, and our cars are in the 22 area on the same basis.

Senator PACKWOOD. Last week when my family went home to Oregon, I went with them during the recess. Here we drive two fairly large cars. There we were living in my wife's brother's house. He left us a Volkswagen which is a two-door car which we got around in adequately. I find that I had not forgotten how to shift, and I could indeed make the car go forward and backward.

Mr. ESTES. You did not need air-conditioning?

Senator PACKWOOD. It did not have air-conditioning.

Mr. ESTES. You did not need it?

Senator PACKWOOD. I did not need it, I got along.

Mr. ESTES. Did you bring it back?

Senator PACKWOOD. I left it there so my wife would have something to drive. And I am curious, if you were translating needs into wants. I like air-conditioning, I like an automatic shift, but I do not need it. And if we are really serious about fuel savings, maybe we are overestimating our needs.

Mr. ESTES. I do not think there is any question that in an evolutionary way we can move families such as yours into smaller, more fuel-efficient cars. But I think we have got to be very, very careful today about putting a Volkswagen-sized car in, let us say, a Buick dealership and have the Buick owner come in with his air-conditioned car that is a reasonable size and comfortable and hope to sell him that car this year.

Now, I think we have got to do this in an evolutionary way, Mr. Senator. We are doing our best to move just as far as we can. You know there may be a judgment factor here on how far and how fast we can move.

Senator PACKWOOD. But 10 years is a fair evolutionary period. If we say to you by 1985 you must produce cars that will get on a weighted sales average basis, 28 miles to the gallon, my hunch is you will produce them and the imports will have to match you because the big cars are not there.

I agree with Senator Haskell, I do not think suddenly all the people are going to keep all of their big old cars forever. You may have a drop in sales for a year or two, but when the Buick owner finally——

Mr. ESTES. That could be very, very serious. We have had a serious problem this year as far as unemployment is concerned. So we want to avoid even a year or two if we can help it, you know.

Senator PACKWOOD. We are going to give you a 10-year lead, and when the Buick owner finally comes in and he only has a choice of buying cars that will get 28 miles to the gallon, my hunch is he will buy one.

Mr. ESTES. Either that or he will talk to you when you come home about it.

Senator PACKWOOD. He talks to me all the time when I go home. But I think you are unduly pessimistic, one, about the sales potential.

Mr. ESTES. That is possible.

Senator PACKWOOD. Two, I think you are translating wants into needs that are not needs.

Mr. DUNCOMBE. Of course, it is wants that are going to motivate people to buy a car. You and I might have quite similar concepts about what the basic car is that would serve fundamental transportation needs, and you and I might agree on this perfectly.

But John Doe comes in to buy a car may say, well, whatever you and I think, I want this car over here. That is the thing that inspires him to buy. It is not your judgment or my judgment, and I think this is one reason why the automobile industry has such a variety of cars out there. What you think is important and what I think is important may be quite different serving all of those varieties of wants.

Senator PACKWOOD. That is exactly what you are saying, those wants, not those needs.

Mr. DUNCOMBE. But, you know our society is based on that.

Senator PACKWOOD. That is correct.

Mr. DUNCOMBE. And if you and I begin to impose our judgments on what the American people should have, we are making a very fundamental change in the way we have operated in this economy of ours.

Senator PACKWOOD. That may be true, but if we are going to get substantial reductions in oil imports and conservation we are going to

have to start in a number of places. I thought all of your statements were excellent stating that the auto industry is not the only place to start.

But we are going to have to do a number of things if we are going to exercise the leadership that this Congress ought to. The people are not yet prepared to accept these measures, they do not want them. If we are going to cop out in Congress because they do not want them we are going to pass a bill similar to the House passed one which was inadequate.

Mr. DUNCOMBE. I would suggest in that connection that the proposals we have made—you know the greatest inconsistency we have today is controlling the price of 40 percent of our petroleum, and at the same time, exhorting people to conserve. The economic approach to this is to decontrol the price of oil and you will get people voluntarily making new judgments on how they want to spend their money; and that is basic to our thinking.

Mr. ESTES. And we will be happy to build that size car at that time. But we think there ought to be incentives for the customer to want to buy them rather than to force us into a possible——

Senator PACKWOOD. I want to come to the employment and the conversion part, also. Assuming that the sales will not drop dramatically, or if they do they will drop for a year or two and finally pick up, where is the problem on employment?

Isn't 10 years a long enough time to convert your facilities without dramatic economic dislocation?

Mr. ESTES. We are making a tremendous step in that regard in the next 3 years, as I have described.

Senator PACKWOOD. Where is the economic disruption if you know 10 years down the road what you have to achieve?

Mr. ESTES. The economic disruption is a fact that if during this period the customer does not get oriented to trading in the larger car with the air conditioning for that smaller car at that time. And let us say that in the interim we have moved instead of 30 percent of our cars being 3,500 pounds, which is a relatively small car in the standards of today, we have got 80 percent of them, and if by that time he is moving in that direction, that is fine. We will be able to do this gradually. But, we think it is unnecessary that you pass legislation so that come 1985, and let us say we are still selling even 30 percent of our cars at 3,500 pounds or 40 percent, and all of a sudden we have got to start building all 2,000 pound vehicles, it may be, it could be very disrupting at that time.

This is not all a matter of economics.

Senator PACKWOOD. Is this disruption that you are talking about from a loss of sales?

Mr. ESTES. That is true.

Senator PACKWOOD. All right, but assuming no loss of sales, there is no problem of converting your plant. You could convert apparently in 9 months during World War II to making tanks and trucks.

Mr. ESTES. We are building today about—we have a capacity to build—25,000 V–8's a day and there are no V–8's in that 2,800 pound vehicle. So we have got to convert facilities and we have got to do it. We cannot do it on an if-come basis, we cannot afford to.

Senator PACKWOOD. I understand that.

Mr. ESTES. So we have got to do it with the market each year. If we were sure we are going to move to four-cylinder engines each year, a certain percentage that can be done, no question. What we cannot stand is an immediate, overnight shift from V–8's or small V–8's even to 4's.

Senator PACKWOOD. Nobody is talking about an immediate, overnight shift, this is not a standard imposed in 1977 and you have to all turn out four cylinder, two-door cars without air conditioning next year. Where is the immediacy in what we are talking about?

Mr. ESTES. The immediacy is going to be when it gets to be mandatory rather than on the basis of the customer wanting it. That is our problem.

Senator PACKWOOD. My time is up.

Senator TALMADGE. Senator Roth?

Senator ROTH. All of you gentlemen discussed at some length that it is better to permit these changes to be brought about in the marketplace. And yet it seems to me that there is some desirability in target dates. All of us have a tendency, even big business, to procrastinate. I think even internally you set a certain target.

One of you indicated that perhaps the automobile industry in itself had not done as much as it should in the area of emission standards until 1973–1974. I think, Mr. Estes, you made that statement.

Mr. ESTES. I did not say that we should, I said that our technological advancements maybe were not as fast as we would like to have them. I guess they never are. We were doing everything we knew how to do.

And let me say this, we developed a catalytic converter in what we consider record time, even faster than the Government did.

Senator ROTH. But, was that not after the Government set certain targets?

Mr. ESTES. Emission standards, sure, emissions and safety, we are going to have some kind of regulations. We hope they are reasonable regulations but we have to have them because those two items unfortunately are not saleable to the customer.

Senator ROTH. The only point I am raising, I wonder if there is not some desirability in attempting to set certain targets, whether they should be penalties or not is another question. But, I am not certain that the industry itself has moved as fast as it can due to the pressure of the marketplace.

But be that as it may, what would be the position of industry if we took another tack, say instead of a penalty, we offered some kind of incentive. For example, we created certain targets and proposed that if a company met these targets that there might be some kind of tax incentive, either to the industry itself or possibly to the consumer.

What would be the attitude of the industry toward that approach?

Mr. ESTES. Well, obviously we do no want any handouts, we do not want any taxes, and we do not want any regulations. That is probably an overstatement and you all probably recognize we do not like that sort of thing.

On the other hand, we think it is important that the customer realize that the energy situation is difficult and it is going to be from now on. We are not in just a phase here with regard to the energy shortage and the difficulties in this area. And consequently, I guess, we would say that anything you can do, and we think that deregula-

tion is one of the ways to convince the customer, our customers, that this is a problem.

Senator ROTH. This is not the question I am asking, though, Mr. Estes. I am saying that——

Mr. ESTES. I assume you are asking about giving an incentive? For instance, I guess there is something in the bill with regard to electric cars which supposedly would benefit the customer if he bought a more fuel efficient car.

Senator ROTH. Let me elaborate, if I may. Let us assume that we had a standard set, something along the House lines, maybe others, but the same approach, and we said to industry, to a company that if you reach these standards each year perhaps there would be a 1- or 2-percent tax advantage in your corporate tax. I am just thinking out loud.

Would this create any incentive without the handicaps of a penalty to the industry? I wonder if any of the other gentlemen from Chrysler or Ford care to comment?

Mr. SECREST. Well, Senator, I guess there would be no doubt that my concern about the impact of this legislation on ability to raise capital would be different if the proposal were such that success would bring a reward from the Government instead of failure bringing a fine.

I have looked at a number of alternative legislative possibilities which try to assist the market in doing what we think it will do. I do not believe that in this case an incentive of the kind you have described is necessary to get the job done.

I think in contrast to the emission control situation, there is such a force in the market encouraging purchase of fuel economy cars that I would think that the sort of incentive you discussed would be better applied to, for example, the development and production of new forms of energy from sources that apparently cannot or will not be developed under present economics.

However, if you offered me the choice between penalties and incentives I would opt for incentives.

Mr. LOOFBOURROW. I think I would agree with the Ford position in that matter. There is one aspect in this whole matter which I think has led to a pretty broad misunderstanding on the part of the public. And that is that 40-percent fuel economy to which the industry is committed to. I am sure there are many people who are driving a 1974 New Yorker that figures in 1980 they will have that same equivalent automobile, same size, same weight et cetera, that he is accustomed to but they will be 40 percent more fuel efficient. And this, of course, is just not the case.

I think we have lost sight of the fact that as Mr. Estes pointed out the most important item for improved fuel economy is weight reduction and to accomplish the necessary weight reduction you have to go to smaller vehicles. I do not believe that these relationships are firmly implanted in the minds of the people who are talking about fuel economy.

Senator ROTH. Could I ask a question there that is somewhat relevant?

We have a national speed limit of 55 miles an hour now on the highways. Why do cars have to be able to go a 100 miles an hour or faster? If you kept that lower would that make any difference?

Mr. LOOFBOURROW. Limiting top speed by reducing power really would not make much difference on fuel economy. If you carry it too far, you begin to lose in fuel economy; if you underpower the vehicle too much. The activity in the car is really related to a safety aspect of the vehicle and the environment in which it lives. And if you have the necessary activity for safe operation at low speeds, you automatically get the capability at the top end. The high-speed capability of cars in recent years has been coming down since the horsepower race of a few years ago. The first reason for it was the tightening of emission requirements, and then the fuel crunch which caused tradeoffs for fuel economy. High-speed capability is deminishing, but it is a byproduct, if you will, of a basically sound automobile which is safe to drive.

Mr. ESTES. May I add something to that?

Senator ROTH. Yes; please do.

Mr. ESTES. Part of the savings, the 20-percent savings we are talking about in the 1,000 pounds of weighted vehicle is in the smaller engine that is provided. The engine automatically gets smaller, even at the same performance level.

Now, as I stated a moment ago, we are also looking at what is the optimum fuel economy level for performance, as Mr. Loofbourrow mentioned. And to put it in context, as I said a while ago, our current cars are somewhat in the 0 to 60 15-second area; hotrods are 10 seconds; and the average automobile is about 15 seconds. We are finding that by dropping that performance level down to 20 seconds, we are gaining fuel economy—not a great deal, but it is 5 or 6 percent.

So what you are going to see in these new vehicles we are talking about, and to accomplish the 40 percent we are talking about, all of our engines are going to get smaller in displacement; there is no question about that.

Senator ROTH. One question that concerns me very much: Having two plants in Delaware—General Motors and Chrysler—is what would be the impact of the House standards on employment? We have had a lot of general statements, but has an actual study been made as to what would happen if these proposals became, in fact, law—on the employment picture?

Mr. DUNCOMBE. We have already taken some preliminary cuts. As you might guess, it is a very difficult question to quantify and it could be illusory. I will say this: Just on the basis of what we have been doing, we have already lowered our estimate of the sales volume for 1980, relative to what we had before, by about a million units. In other words, we are now thinking in terms of sales in 1980 of a million units less than we had projected earlier.

Senator ROTH. What had you projected earlier?

Mr. DUNCOMBE. We had projected a total volume of 17 million cars and trucks. We have lowered that to 16 millions cars and trucks. And it is about a million less on the passenger car level, and trucks are about the same.

My guess is, and this a rough guess, that we can expect a loss in sales of at least a million units a year. In other words, we would be down at another lower plateau. We are doing more work on this, and as we do more work on it, I would be glad to give you whatever we come up with. But it has got to be a very, very substantial factor if, even

on the basis of the voluntary program, we see a loss of a million units a year.

Mr. ESTES. I guess you are talking about the 20.5-mile-per-gallon level in 1980? 20.5 miles?

Senator ROTH. Yes.

Mr. DUNCOMBE. To get the 20.5 miles will mean a very important further shift down in the type of car that we can produce.

Mr. ESTES. And some postponements, which accounts for the million loss.

Senator ROTH. Mr. Chairman, I wonder, do we have a representative of UAW testifying on this matter before us at some time?

Senator TALMADGE. We will have, before the hearing is over; yes.

Senator ROTH. Thank you, Mr. Chairman.

Senator TALMADGE. Senator Ribicoff.

Senator RIBICOFF. Thank you, Mr. Chairman.

Mr. Estes, I am intrigued by your statement on page 5: "We try to put the kinds of cars on the market that the American people have indicated they want to buy."

And then you say that foreign imports have remained steady, but your sales have gone down. They represent about 21 percent, I understand, of the market today.

Now, you also mentioned the type of cars Americans want, that have five passengers and you can put a lot of lugguage in and take the trip and maybe squeeze in grandma.

I am looking at your charts that you left with us, and I notice that a Mercedes 300–D gets about 27 miles per gallon. That is a diesel.

I have a friend who sells Mercedes in Hartford, Conn., who tells me that he has got a waiting list of at least 9 months for Mercedes. He could sell all he could get.

I am curious; why have none of you made a diesel? What is there about a diesel that gives that extra mileage? And diesel fuel is cheaper. Why is it that not a single one of you giants have made a diesel automobile?

Mr. ESTES. It is easy to answer.

Senator RIBICOFF. I would like that. I think the American people would like that.

Mr. ESTES. The very best that anyone knows how to make in the way of emissions—and I am talking about the NOx standards—it is one of the three constituents that is legislated currently at 0.41. The lowest anyone knows how to get a diesel, as far as NOx is concerned, is 1.5. We might be able to get to 1. So, until we have some assurance that we do not have to meet the legislated emissions standards in 1977 or 1978 or whenever—it would be ridiculous for us to spend a lot of money to tool a diesel.

Let me tell you this, Senator, we are looking seriously at the diesel now, on the premise that possibly the emissions standards in the future will be straightened out to permit this.

Senator RIBICOFF. I am puzzled. Under the laws of this country, do the imports not have to comply with our emissions standards? Does the diesel—the 300–D—not have to live up to the standards set by EPA as well as your automobiles?

Mr. ESTES. Mr. Senator, I am sure that Mercedes would have never tooled that diesel on the basis of the American market.

Senator RIBICOFF. But they have been in the——

Mr. ESTES. They only tooled it on the basis of the European market, and they are bringing it in here. They will have to stop bringing in the diesel the day the standards go below, let us say, 1, 1.5.

Senator RIBICOFF. They are living up to the standards now, are they not?

Mr. ESTES. Sure; the standards are well above that at the current level. The current standard is 3.1, for instance; so the diesel fits into that fine. In the future, we are going down to 0.41, unless Congress does something about relaxing that.

Senator RIBICOFF. I bet dollars to donuts, as the standards go up, Mercedes-Benz will come up with those standards and still sell the automobiles. Now, this is what puzzles me, that there is not the genius and the technology within the three of you, your companies, to make a diesel. I think this is a grave question on the minds of every American. Why can you not make a diesel automobile?

Mr. ESTES. We are building lots of diesel engines right now, and as I say, they just do not meet the standard that Congress says we have got to meet, as of today, in 1977. And Mercedes—you can ask Mercedes when they come in—I am sure they do not know how to get 0.41 NOx at the current time.

Senator RIBICOFF. In other words, are you saying that the Mercedes today is not meeting the standards required by law?

Mr. ESTES. Senator Ribicoff, you do not understand. Today's standards in this constituent are 3.1.

Senator RIBICOFF. All right.

Mr. ESTES. It is very easy to make a diesel meet 3.1. But in 1977 or 1978, when we get to the legislated statutory levels, that 3.1 goes to 0.4, and there is no way to do it. Now, we cannot afford to tool a diesel engine for a passenger car, without considerable risk, on the basis of 2 or 3 years' production. And this, as I said in my statement, and I think we all agree, that the low level of NOx in the statutory emission standards is one of the reasons that is inhibiting alternate technology, as far as alternate engines are concerned right today.

Senator RIBICOFF. Let us take the emissions standards—this is presently. Mercedes has been making diesels for years. You never have been. None of you have ever made a diesel.

Mr. ESTES. We are making diesels in Europe right now. We are selling them every day.

Senator RIBICOFF. Well, why are you not making them in the United States?

Mr. ESTES. The reason we are not making them in the United States, Mr. Ribicoff, is the fact that we are not going to invest millions of dollars on an engine that may be outlawed in a couple of years. It does not make sense.

Senator RIBICOFF. But Mercedes has got a waiting list of 9 months today, and you are making them in Europe. Why are you not importing your diesels from Europe into the United States? They comply with the law now.

Mr. ESTES. We have considered that, and if you look at the total volume of Mercedes—I do not know if you realize what you are talking about—but it is very, very low, relatively. You know, they will sell 40,000 total vehicles in the United States, and the diesel is running, what, 20 percent of that; so they are talking about very, very few vehicles in the United States.

Senator RIBICOFF. But when you say we try to put the kinds of cars on the market the American people have indicated they want to buy, and if each and every one of you is making a diesel automobile and you could advertise it, you could sell those cars in the United States of America, but you have never chosen to do so.

Mr. ESTES. Why do you not say we have not chosen to bring in our diesel, our Opel, into the United States because, you have to agree, it is not reasonable to put a great investment in an engine that is going to be outlawed in 2 years.

Senator RIBICOFF. I do not think it will be outlawed in 2 years. I am just curious, if there is somebody from Mercedes here to say that they are not going to sell the Mercedes in this country 10 years from now.

Mr. ESTES. As soon as Congress settles on the future emissions standards, that will get serious consideration.

Senator RIBICOFF. Well, to me it is a lack of all of you to be up to date of what the American people want. The heavier the car, the more money you make, and you have been interested in selling heavy cars with low mileage because you make a lot of money on it—a lot more than the small ones.

Mr. ESTES. I would like to remind you of a little history, if you would not mind.

In 1961, we took 200 pounds out of our regular sized cars. We introduced a brand new small aluminum V–8, a small V–6, a Buick, an Oldsmobile, a brand new four-cyclinder engine in a Pontiac, and we increased the volume of 4's and 6's in Chevrolet; and 1965, in order to get adequate capacity of big V–8's to satisfy the market, because we could not sell the little ones, we sold the equipment on the V–8 to Rover; we sold the V–6 to Willy; we moved the four cylinder to Mexico—and incidentally, we just brought it back again the other day because it is doing a great job for us today. But we did not do all of that because of any other reason except that the customer had decided in 1965 he wanted V–8's.

Senator RIBICOFF. You are a leading executive of a large company, but this shows exactly what is wrong with it, because you lost the market; so you got out of the market of small cars and the Europeans came in and grabbed the market and you were indifferent to it and now you wake up with egg on your face.

Mr. ESTES. No, no, no; no, no.

Senator RIBICOFF. And now you are going back to the small ones after having turned the market over to the European countries because of your indifference.

Mr. ESTES. We have not turned any market over to the foreigners.

Senator RIBICOFF. You sure did, because they came in while you were making the big ones; they came under the barriers with the small ones. And now they have 20 percent of the market.

Mr. ESTES. Senator, they were here at that time.

Senator RIBICOFF. But they were not going full guns as they are now.

Mr. ESTES. They have not increased at all.

Senator RIBICOFF. As Senator Nelson points out to me, 400,000 cars imported in 1963 and 2.5 million cars today. That is a pretty good market that I think you lost.

Mr. ESTES. 2.5? That will be a great year when they bring in 2.5 million.

Mr. DUNCOMBE. It is nowhere near 2.5 million, Senator.

Mr. ESTES. It is 1.4 million.

Senator RIBICOFF. Before my time is up, one more question.

If the President succeeds in decontrolling oil, I understand that will raise the price of gasoline about 8.5 cents per gallon. What will that do to the sale of your automobiles, if gasoline goes up by September 1, 8.5 cents above what it is now?

Mr. DUNCOMBE. I think the primary impact on that would be in a further shift of the mix. Currently, about 50 percent of the sales of cars are small cars. By that, I mean cars comparable to our Nova or smaller—including the imports. And our feeling is that if the price of old oil were decontrolled and you got this, let us say, 8.5 cents—I have heard figures, incidentally, from about 5 to 8 cents—what you would do primarily is provide an incentive to buyers to go toward smaller, more fuel-efficient cars. And we believe that this is the right way to go about this problem, not only because of its impact on the new car sales, but I think the thing you must remember, Senator, is that there are 100 million cars on the road, and if the price of gasoline were permitted to reach—were decontrolled—it would have an impact on the way all of us use our cars. I think it would encourage car pooling; I think it would encourage the discontinuance of what might be considered frivolous driving; it might discourage the sort of driving that the teenager does on a Saturday around town. And I think that in your thinking about this entire energy problem, it is important to keep in mind that these prposals such as you have here relate to only the fringe of the total car market; that is, the new car market. And our goal ought to be to encourage conservation in the use of our transportation facilities—and that is 100 million cars that are currently on the road.

It would have an impact. It would shift the mix down. And I think that to that extent, it would contribunte to our long-range energy goals. But even more important than that, it would contribute immediately to the conservation effort which, in our company, we believe is important today.

Senator RIBICOFF. Thank you, Mr. Chairman.

Senator TALMADGE. Senator Hansen.

Senator HANSEN. Was Senator Brock not here first, Mr. Chairman?

Senator TALMADGE. I do not have it so recorded.

Senator HANSEN. All right, fine.

There have been a lot of questions asked of you gentlemen about legislation and whether we should face up to our responsibilities. They are very interesting.

I am going to ask some of my questions to you, Mr. Secrest, because between the panel and Ralph Nader, I think GM has gotten more attention than it really deserves at this moment, and I say that because I am a driver of a Buick and a Chevy.

Is it not a fact if we wanted to do something about safety, Ralph Nader and the Congress of the United States, had we said we were going to pass a tough drivers law that would revoke permanently the driver's license of anyone who was caught driving under the influence of alcohol, we would have taken a very dramatic step that

would have reduced more than any other single thing that could have been done legislatively?

I ask that of you, Mr. Secrest.

Mr. SECREST. Well, I think there is no doubt that all of the students and analysts of the vehicle safety issue agree that if we could find some way, through legislation or something, to reduce the use of alcohol by individuals operating motor vehicles, it would have the effect you suggest; no doubt about it.

Senator HANSEN. One way to reduce it is to pass a law that says if a guy is caught driving while he is drunk, he loses his license, he cannot ever get it back. Now, if we want to face up to some tough decisions, I suggest there is a good place to start.

I used to be chairman of the National Governors Conference on Highway Safety, and at that time, it is my recollection that more than half of the fatalities on American highways were the result of someone driving while he was drunk.

Mr. SECREST. I think there are some very useful statistics bearing on that, from the experience of some of the overseas countries, particularly Sweden. I believe some of the other Scandinavian nations also have what appears to be an absolutely iron-clad proposition involving jail terms if you are driving with alcohol in your blood beyond a certain point on the measuring device. And I think it has been very effective.

Senator HANSEN. My purpose in asking the question is to say that I think we are overreacting in our response to a very serious energy situation. I think it is serious, but I think it has to be approached in two ways. One is to take all such steps as seem indicated that will bring about conservation of energy, on the one hand. And the other is to take simultaneous steps that will do something about increasing supply. And I gather from the testimony that I have heard here this morning, that opinion is shared by you panelists. I am not certain. Did you address that point, too, Mr. Loofbourrow?

Mr. LOOFBOURROW. It was not in my prepared statements, but I certainly concur with that approach.

Senator HANSEN. It is a matter of fact that without any legislation in Europe they have gone to using smaller cars, probably for two reasons: One, the shorter distances that they drive and secondly, the high cost of gasoline.

Is that opinion shared by you, gentlemen?

Mr. SECREST. Yes, I think there is no doubt of that.

Senator HANSEN. Has there been any legislation by any of the European countries as to the size and weight of vehicles that you know of?

Mr. SECREST. No, no country.

Mr. ESTES. France and Italy.

Mr. SECREST. There have been some tax provisions in various countries that relate the amount of tax that a car owner pays, either each year or when he buys a car, which apply to the engine size, or something like that. Most of the economic impetus to the development of the characteristics of cars overseas, has been related to the cost of fuel. This is particularly pertinent in relation to the real incomes of the people. In most countries, real incomes are lower than in the United States, but fuel prices have always been higher. And this has created incentives.

Senator Ribicoff is no longer here to pursue the diesel analogy, but the Mercedes diesel is priced in the United States at $16,000. It is a wonderful car, but it is not cheap.

Senator HANSEN. That was my next question. You said the cost of a Mercedes diesel is $16,000?

Mr. SECREST. Yes, it is a fine car. But it was not in great demand until the price of gasoline in the United States moved off the plateau of around 35 cents, where it stayed for several years, and began to spiral at the time of the oil embargo. Gasoline is now at 57 cents or more, and surely going higher regardless of which set of options is chosen by the Congress. A diesel car is a heavy, expensive and costly unit and which therefore had no market in the United States as long as gasoline was cheap. Now however, there is a market for such a car. Even at a high price.

Senator HANSEN. When we speak about steps that might be taken legislatively to induce greater conservation of energy, I am impressed, as I know the chairman is. You do not have to drive very far to observe the number of automobiles around schools—not colleges exclusively, but high schools as well, and even grade schools.

What would happen in your opinion if the Congress were to put the minimum age of drivers, excepting those employed in industry, up to, say, 18 years?

Senator HASKELL. If the Senator would yield, I think you might have a mother's revolution.

Senator CURTIS. You would save more gas if you would make it 28 years.

Senator HANSEN. Well, the fact is—it seems to me to be a fact—that I notice that the insurance companies recognize a male under 21 or 24 as being the most hazardous of all persons to insure.

Mr. ESTES. Unmarried, too.

Senator HANSEN. I should think if we want to get at the root cause of the problem and not take the car away from the working man, and he may be only 18 years, but to keep it out of the hands of youngsters who do not need to drive—we could save a lot of energy. I am not recommending this, I have five grandkids and some of them are driving, but the point is that it is awfully easy to attack the industry and to criticize it. And I am not one who thinks it is without blame, by any means. But, I think sometimes, as it seems to me we did in safety devices and appliances, we went completely overboard. We added to the cost of cars. We added to the weight of cars; we increased the consumption of energy by cars to strike at one thing: Fatalities on highways.

And if we had really wanted to look at the big problem here. I still say: Do something about drunk drivers. But, you know, every 2 years, or every 6 years, we start thinking about getting reelected. And I think that is why we do not take Senator Haskell's approach: That we move the driver's age up.

I gather from what you say that you do not think that the steps that have been indicated here to do the things that you believe are going to come about as a consequence of the operation of the economy are in the public interest. You do not think we should legislate these standards that have been proposed and are before us now.

Would you respond to that, Mr. Loofbourrow?

Mr. LOOFBOURROW. We concur with that viewpoint completely, because, as has been mentioned before, fuel economy with the increasing

price of fuel is becoming an extremely marketable characteristic in automobiles. But there will remain a requirement for automobiles of all sizes, because of the needs of people who buy them.

And, as has been pointed out, it is not necessarily the new car buyer who is going to be the one who bears the burden of the elimination of large cars. The fellow who is below average income—a medium-class laborer with a family of six—he is waiting for that 4-year-old station wagon which he can buy on the used car lot.

If the regulations make it impossible to put that new station wagon in the market 4 years before, that car is never going to get to him. So he is going to be the one that gets hurt.

Senator HANSEN. What about SO_2? I am told that when we started legislating on these emission standards, we apparently did not discern the significance of SO_2 in the air. Now there seems to be great concern, particularly in a city like Washington, that people who have respiratory problems could be seriously afflicted by that.

Would someone respond to that?

Mr. LOOFBOURROW. SO_2 is really not a meaningful item in automobile exhausts. However, SO_2 is one of the measured pollutants in the air. In cities where they have an air quality measurement, which is recorded daily, they measure one or two pollutants.

One of them is particulates which is always part, if not all, of such measurements. Many cities also measure SO_2. But the SO_2 primarily comes from fixed sources. And of course, the particulates are not part of the automobile's emissions. So the things that are used to measure the quality of the air are non-automotive associated.

Mr. ESTES. I would just like to add that automobiles, as far as sulfur emissions are concerned, only are responsible for about 1 percent of the total in urban areas.

The concern that has been expressed, is that the catalytic convertor, in doing its job on the regular emissions, also converts SO_2 into sulphates that might be harmful.

There are only about five labs in the country that can measure it, it is so low at the current level. There is some concern about 10 years hence when all cars have catalytic converters that someone standing near a crowded highway, with, I think, the parameter or the software that was used in determining this was a 10-lane highway for automobiles traveling at 60 miles an hour and a pedestrian standing about 10 feet away might be exposed to a severe problem.

We do not question that this might happen. And, in view of that—we have coming this fall what we call a big experiment.

We are going to fill our proving ground full of cars with catalytic converters. We are going to measure the sulphate emissions at the roadside under all kinds of atmospheric conditions.

Incidentally, the EPA, and I think some of our competitors, have agreed to observe these tests, in order to get some facts in this case. And that is all we need. And if it is a problem, I can assure you we will step up to it.

Right now at least, it is no problem. And it may not even be a problem in the future, but there is a conversion in the catalytic converter from the SO_2.

Now, this all comes, of course from sulfur in the fuel. But there is a conversion from, let us say, less harmful sulfur compounds into

possibly more harmful sulfur compounds, in going through the catalytic converter. That is what started it.

Senator HANSEN. My time is up, Mr. Chairman.

Senator TALMADGE. Senator Dole.

Senator DOLE. I think it is interesting that there is basic agreement among all three or four witnesses at the table. Is that correct, insofar as the House-passed bill is concerned?

Mr. SECREST. There appears to be; yes.

Senator DOLE. Are there any disagreements?

Mr. ESTES. With our position?

Senator DOLE. Right.

Mr. ESTES. I stated our position——

Mr. SECREST. As far as I can see, Senator Dole, I believe we are in general agreement. I have not had a chance to read through the details of the longer statements of my associates. And they have probably not read ours, but certainly, in general, we are in agreement.

Mr. ESTES. It seems to me from our verbal statements, we are in agreement.

Senator DOLE. I think in your statement, Mr. Estes you indicated there was more energy consumed for residential purposes. But no one has recommended we be limited to five-room homes.

Mr. ESTES. Or two-room homes, maybe.

If we are going to be comparable to the 28 miles to the gallon, maybe it is even smaller than a 5-room home.

Senator DOLE. I think you make a good point: if we are really going to look at the problem, we have to know the problem and we have to single out the——

Mr. ESTES. Yes; we just ask that whatever incentives we have for conservation, let us be sure that they apply to all uses of energy, rather than just gasoline.

Senator DOLE. Do you have other examples, besides the residential use of energy?

Mr. ESTES. Well, industrial uses. I do not think there is any question that in our industry and in all industries, we are using gas today, natural gas today, where we should be using oil. I think that ought to be looked at by all of us.

And you say, well, why would you do a thing like that, when we have such a shortage of natural gas today. And the reason we did it is from an economic point of view, and our industry is highly competitive, from an economic point of view from an emissions point of view, natural gas was the right way to go except for the fact that probably it was artificially priced too low and we are looking at the wrong economics when we use natural gas for certain operations.

I am talking about electrical generation, for instance, in heating and generation of steam in our plants. And on the other hand there are certain operations, where, with current technology, we do not know how to use any other type of energy. We say it should be conserved now for the operations where we know no other way. But let us look at everything. That is all we are saying.

We are trying in our industry, in General Motors, at least to do everything possible we can to conserve all kinds of energy and to move as fast as possible, within economic constraints, to coal. And of course, we encourage the use of nuclear, because in both of these cases,

we conserve two real critical situations we have: that is petroleum and natural gas.

Senator DOLE. A general question that might be propounded to all three witnesses would be the state of the employment now in the auto industry, and what do your forecasts say in the next 6 months? Is there a reason for optimism?

I might just start with you, Mr. Estes, then go to Ford and Chrysler.

Mr. ESTES. Of course, as you know, I think, we publicly expressed optimism in the future. We have said all along that we thought that our industry, at least General Motors, had bottomed out in January or February.

Senator DOLE. How many are out of work now?

Mr. ESTES. At the peak we had 225,000 on a temporary basis, including indefinite as well as temporary layoffs. Currently we have about 80,000 still on indefinite layoff. We hope that in August that will be down to 70 to 72,000, somewhere in that area. And hopefully by the end of the year, we will have those back to work.

Right now our plans are to be at about a 70 to 75,000 level of indefinite layoffs by the start of the model year 1976.

Senator DOLE. So there has been a rather dramatic shift?

Mr. ESTES. We are improving the situation day by day.

Senator DOLE. What about Ford?

Mr. SECREST. Well, our situation, Senator Dole, is somewhat similar. Our peak months for layoffs were January and February. Counting indefinite layoffs and temporary layoffs, that is people off for a week or more but still on the rolls, we had around 65,000 of our hourly workers on layoffs. This was in the range of 35 or 40 percent out of work in those months. In addition perhaps 8 percent of our salaried workers were unemployed.

Now that 65,000 number is down to around 23,000 or around 13 percent. I think that through the remainder of this year, unemployment rates in our company will still be in the range of 10 percent to 15 percent. I do not see business recovering to the point where the problem is going to go completely away.

We are forecasting a relatively slow recovery and not a dramatic turnaround.

Senator DOLE. The same with Chrysler?

Mr. LOOFBOURROW. We believe we are seeing the turn occur. We are presently at 30,000 layoffs. And the max figure was about twice that at the first of the year. So this is the lowest we have reached since the first of the year. We have added a second shift in two of our operating plants. So we believe that things are now headed upward, as has been said, it is not a dramatic change, but it certainly is in the right direction.

Senator DOLE. I think Senator Packwood, Senator Haskell earlier, touched on another point. But if we assume by 1985 that laws are passed and we have to reach 28 miles per gallon, it would cause quite a change in your operation. Maybe it is too early to have any figures on what it might do to employment.

I think you talked about units. But could you translate that into jobs. What would it mean, job-wise, if we mandate something that is going to mean smaller cars?

Mr. DUNCOMBE. Well that million car drop translates into about 250,000 jobs.

Mr. ESTES. It is about one for four.

Mr. DUNCOMBE. That is the direct employment effect of a million automobiles.

Senator DOLE. Is that shared by Ford and Chrysler? It may be too early to pinpoint it.

Mr. SECREST. I think the relationship between jobs lost to units of sales lost is about the same. We have not really done a projection of how much smaller, if any, the market would be under the presumed 1985 conditions. We seem to be considering here the assumption that all cars would be the size of a Volkswagen Beetle or smaller. I am not sure I can give you a valid estimate as to how serious a change that would be.

I think it is important to keep in mind that the option we are suggesting is that we do not choose between forcing people to drive cars the size of today's cars with the fuel economy of today's cars versus Volkswagen Beetles. We think that it should be possible to save very, very substantial amounts of fuel and improve the fuel efficiency of today's so-called big cars by 50 percent or more, and still have vehicles that will be 1,000 pounds or more lighter than today's vehicles. They will do for the public what today's big cars do. I do not think that we have to go all the way to Volkswagens in order to reach an acceptable energy goal.

Now, 28 miles per gallon fleet average is another thing. And if we do go that far, I think we ought to make clear what choice people are being asked to make and how much difference in petroleum consumption would come from the two possible options. We cannot compare 28 miles per gallon with today's conditions because fuel economy in 1985 will be far better.

Senator DOLE. I wanted to ask one more question before my time expired—do you have generally the same view?

Mr. LOOFBOURROW. I think it is imperative that the public be advised as to what will be the consequences of these kinds of bills. I am sure that 90 percent of them out there are saying, great for you, Congress; you are going to get us better fuel economy. But they do not realize the rest of the things that go with it.

Senator DOLE. I think you are right. I think what the House tried to do is to give the public at least the appearance that we were going to have energy independence at no cost. No one had to sacrifice, no one had to suffer. But we are not going to have energy independence by simply imposing quotas.

Finally, do you all favor decontrol of natural gas and oil?

Mr. ESTES. Natural gas is very serious.

Senator DOLE. I think many of us feel that way in Congress, but I am not certain that over half of us feel that way in the Congress.

I would like permission to make my statement part of the record following the statement of Senator Curtis.

Senator TALMADGE. Without objection, so ordered.[1]

At the hour of 11:30, this meeting will officially adjourn. Informally and unofficially, we will continue to seek the advice of the witnesses.

Senator Nelson?

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[1] See p. 2.

Senator NELSON. Gentlemen, I have a copy here of a magazine that I wonder if you happen to be familiar with. This issue is entitled, "A Lighter Car," published by Pittsburgh Plate Glass Industries, a recent number, and it includes an article on auto-emission standards.

Have any of you seen that article?

Mr. ESTES. We are familiar, I think, with everything Pittsburgh is doing but I have not seen that particular publication.

Senator NELSON. They do a lot of work with the auto industry?

Mr. ESTES. Absolutely; we work very closely with them, particularly in the area of plastics and lighter materials.

Senator NELSON. It is a very brief article and it shows some Pittsburgh Plate Glass findings on their newly developed exhaust trap.

But, let me read just a few sentences from it:

> Tests of a new auto-enmissions control system, an alternative to the catalytic converter, give promise that tough 1978 Federal emission limits can be met.
>
> In December, the California Air Resources Board reported on six series of tests on a modified 1974 Ford Pinto station wagon owned by Pittsburgh Plate Glass Industries. In every test, as reported in the chart on the opposite page, the Pinto met the stringent 1978 limits with no reduction in fuel economy.

Elsewhere in the article they state that they think that it will last for 50,000 miles. It says that Pittsburgh Plate Glass has spent 5 years developing and testing the particulate trap which replaces the standard muffler. Then they go on to say that this filter unit adds about $12 to the manufacturing costs. Life expectancy for the trap is 50,000 miles.

> Only the future holds answers to some questions, will Congress postpone the 1978 emission control limits, will auto companies adopt an emission control system or a new type of engine that permits use of high compression ratios, leaded gasoline, and particulate trap?
>
> But, one question already is answered—the technology exists in experimental systems to meet the 1978 limits with good fuel economy and with promise for controlling sulfate emissions.

Then they show the six tests that were done with the 1974 Ford Pinto. Now, as you all know, the current standard is 15 grams per mile for carbon monoxide. The tough 1978 standard is 3.4 grams. The Ford Pinto on six tests was not just at 3.4 grams per mile but at 2.99 in one test and at 2.24, 2.48, 2.26, 2.03 and 2.65 grams in the others.

So, on all these tests, the Ford Pinto with this equipment was well below the tough 1978 standards for carbon monoxide.

Now, for hydrocarbons the current standard is 1.5 grams per mile while the 1978 standard is 0.41. The Ford Pinto with this new equipment tested out at 0.17, 0.11, 0.11, 0.10, 0.11, and 0.13 grams per mile of hydrocarbons, well below 50 percent of the tough 1978 standard, and at less than one-fourth of the standard in one of the tests.

On nitrogen oxide, the standard for 1978 is 0.4. In the tests, the Ford Pinto did 0.26, 0.23, 0.27, 0.22, 0.23, 0.26. I am wondering, I thought you might be familiar with the equipment that Pittsburgh Plate Glass has been dealing with.

Is anybody familiar with it?

Mr. SECREST. I believe that the system referred to there, and I am relying on one of my engineering colleagues who handed me a note on it, is the system developed by Questor, another company that supplies components to the auto industry and I presume is working with Pittsburgh on this.

Senator NELSON. That is correct.

Mr. SECREST. Ford is doing a lot of work with Questor and we have submitted for the record in the EPA suspension hearings, a great deal of information evaluating not only that device but dozens of others.

The law, of course, requires us to meet certain standards by 1978, but that report you read uses the words, "on an experimental basis;" did I hear that read in there?

Senator NELSON. Yes.

Mr. SECREST. With each of the experimental devices to date the facts are, as we see them, they are not ready for production. That despite the fact that we would be delighted to find some way to resolve this problem, and it is of no benefit for us to continue this long struggle to try to design systems that will meet the law unless such systems are production fundable.

We are spending millions and millions of dollars on an attempt to work out every conceivable alternative that might yield a technical solution.

At the present time, as shown in our sworn testimony on the EPA suspension hearings, we have been unable to find a device that is proven in any sort of production basis to deliver the results necessary to meet the standards. In the particular case of the Questor device, we are concerned that the tests that have been run to date show very serious fuel economy penalties.

Senator NELSON. In here they say not.

Mr. SECREST. I think it would be appropriate for us to submit for the record the information we have given the EPA on that particular one.

I notice that in the press conference held a couple of weeks ago at which Mr. Zarb and others talked about the recommendation of the President for an extension of the current standards. Mr. Zarb was asked about new technology for the future which could get improved fuel economy while meeting more stringent emission standards. He replied:

> I can just play the ball from where it is at the moment. No one has produced those technology improvements, no one has shown them to us and if they are hidden in the basement of somebody and they come out at some later date then we ought to take a whole new look.

This is our view, we are sometimes painted as wishing that anyone who has an idea would stay away so we could not make any contribution to solving the problem. The law requires us to solve it, the law requires a good faith effort on our part to solve it and if we do not make a good faith effort to deal with anyone.

Questor is one such company, Gould is another. At the last hearing, a leading executive of the Gould Co., another supplier firm, appeared before one of the Senate Committees and said in effect that the auto companies were not testing his product seriously enough. They just were not giving him the kind of cooperation that he ought to have and that led to a very, very extensive interchange of every telephone call and every visit and every possible contact that had ever been made between this supplier and the Ford Company—I suppose the others as well.

And I think the record will show, certainly we are willing to stand on it, that we are doing everything we possibly can to investigate

every idea both from our own shops and from outside suppliers to see if we can resolve the problem.

Mr. ESTES. Senator Nelson, I did not recognize Questor as PPG.

Senator NELSON. This is not, they are working with them.

Mr. ESTES. Is there a fuel economy number in that?

Senator NELSON. No; what they say on fuel economy, the sentence I read earlier, the last sentence was, "the technology exists in experimental systems to meet the 1978 limits with good fuel economy and with promise for controlling sulfate emissions." And I do not know what they mean by, "good fuel economy."

Mr. ESTES. That may be the problem because our Pontiac division for 5 years worked very closely with Questor and prior to the importance of fuel economy, it looked like that might have a chance of doing the job. And the principle on which it works is a considerably richer carburetor in which it keeps the fire burning in the reactor to get rid of the emissions and it is kind of a dual setup. There was another reason for dropping it in our case and that was that the durability, we were never able to get the durability beyond about 20,000 miles and we did not think that was adequate.

But the basic reason, as Mr. Secrest has said, is that it may be what they consider to be adequate fuel economy. It is not what we consider in the concept of today, adequate fuel economy.

Senator NELSON. They do not give the dates of the test, it is a recent publication, but it is a California test.

Mr. ESTES. I can assure that we will doublecheck and make sure we are up to date. They may be comparing it with their 1974 Pinto you know; and that is not very good.

Mr. SECREST. Oh, I would not say that.

[General laughter.]

Mr. LOOFBOURROW. Senator Nelson, I would like to say that Chrysler is also familiar with the Questor system and our results and experiences have been almost identical to what Mr. Estes has reported.

The CHAIRMAN [presiding]. Senator Brock?

Senator BROCK. Gentlemen, I have been most interested in your testimony. I am not familiar with the device mentioned by the gentleman from Wisconsin, but I think you may be facing the dilemma between environmental and conservation objectives.

I think the point was made about manadating a 28-mile-per-gallon fleet average is something that could be met, if we were willing to compromise in other areas, size, weight, environmental standards, and the like. The point is, we cannot by statute mandate technology in all areas. I think that is the essence of your testimony.

We are discussing today not just automobiles, we are discussing the whole energy problem and hopefully the Senate will do a competent job. The House has not. And I think we have to establish responsibility in this area.

I would like to point out, I think it was the statement of Mr. Estes, that you were using natural gas because it was a cheap energy source and it was cheap because we had mandated a low price. Now the same is true of gasoline. We are holding the price below the market by law and as long as that happens, market forces cannot be brought to bear to correct the problem. And this is the most fundamental thing we need to do: To restore the market to its functioning plane by the

deregulation of gas so that at least the market forces will be supportive of Government policy.

Mr. ESTES. It will support us, too.

Senator BROCK. And of course the industry as well.

I might say I am a little bit weary of the discrimination against those of us who constitute the 28 percent of the families who have more than two children. I have four children, a beagle, and a half-beagle, and we have no idea what the other half is.

We do have a problem when we want to travel. We have a 1970 Buick station wagon, Mr. Estes. It cost me a considerable amount of money yesterday to get back into operating condition, the transmission went out. But I cannot afford to drive a Nova or a Pinto because that would require me to buy two cars and my wife would drive one with two children and the beagle and I would drive the other two children and the half-beagle.

We would use more gasoline than we are using now and I would use more energy and have less of a family in the process. That is what bothers me about us saying that you cannot accommodate the needs, the disparate needs of the American people, get that is what we are beginning to reach toward when we say you have got to have a 28-mile-per-gallon average, because, I tell you something, in 1985 I still will want a car that will carry six people because that is the size of my family and I like to travel with them.

If you cannot put them in a Vega wagon or a Pinto wagon, I am not going to be happy and I am not going to buy your product and I will keep this doggone Buick floating as long as I can; just because that is a personal requirement of mine, it is not a matter of needs or wants. It is a matter of physical necessity for me to keep my family together.

I think that is why I raised some question about the mandation of these standards that are not in the real world. The Senator from Oregon is blessed with two children, and they are beautiful. He was smart. I am not as good at family planning as he is.

I have got a different problem. I am just doggone weary of the Congress asserting its ultimate wisdom on some of these questions. General Motors and Ford and Chrysler have to face the market every day, every week, every year and you are getting the consumer's judgment. The Congress faces it every 6 years and we are getting ours. Frankly you are doing better than we are.

I question whether we should try—would it not be better to take the tack that Mr. Roth proposed, gentlemen? Let me ask you a different kind of a question. He proposed incentives as opposed to penalties. May I suggest a different approach entirely from that. Would it not be more feasible to penalize pollution on the basis of its real cost to the American people? Would we not be better to have a tax on the percentage of excess emissions, noxious emissions, than it would be to have some set standard that may not be within technical feasibility?

Would you like to comment on that?

Mr. ESTES. Certainly, Senator Brock, you have the perspective that we tried to put across; and, as I said, there is not any question that emission controls on vehicles and safety in some areas is not salable and, consequently, we need some Government regulation.

We have said many times, and I will just say it again, that all we ask in those areas is that we are sure that whatever regulations there are, are health effective, safety effective, and now, energy effective. And if we examine all of the regulations in that context we have no argument at all. We just say let us be sure of the facts, let us investigate our current vehicles in the field and see if everything we have done in the past several years which has increased the weight of our vehicles and our fuel economy, let us make sure that all of those regulations are health effective, cost effective, and energy effective.

And if you look at the emission problem, as you have suggested, we would have no objection to that. I think it would be a good idea.

Senator BROCK. One of the problems I have with testimony from people such as yourselves is that, generally speaking, we get a statement that this is or is not technically feasible. But too rarely are we able to pin down the true cost of various policy alternatives. We do not have the mechanism in this Government for evaluation of our programs. You do but we do not.

Is it not possible for you to quantify your testimony in terms of jobs, in terms of price per car, in terms of price to the ultimate consumer on the various alternatives that we are facing you with so we can have some tangible things that we can see, and sense, and touch?

Mr. ESTES. In some areas we can and in other areas it is very difficult. But that is the reason I brought Dr. Duncombe along.

Senator BROCK. To the extent that you can, I would very much appreciate your responding to some of the questions that have been asked, as I say, to the degree you can in a quantified fashion. What does it mean, what do these various alternatives. in terms of the consumer, cost?

I think Mr. Secrest mentioned that an 8-percent shortfall in this mileage figure would cost him a fine of $225 million. What does that translate into the consumer cost in terms of cars, what does it translate into in terms of consumer costs in reduced technology, the ability to invest in new and better techniques? Can we quantify that a little bit?

Mr. DUNCOMBE. In this whole area of emissions and safety we have stated publicly a number of times essentially two factors. Now, one is that the consumer is currently paying about $600 per car for the safety and emission equipment that has been put on since those programs——

The CHAIRMAN. Would you mind speaking into the microphone? I cannot hear the answer.

Mr. DUNCOMBE. I was saying that on the basis of General Motors' costs, the buyer of a new car today has a cost, an added cost of about $600 per vehicle for the safety and emission equipment that is on it—of that, $385 is safety.

And as we look ahead to meeting the standards that are now on the books, on the basis of our current cost estimates, it will be approximately another $600 of cost. In other words, this is over and above the current $600 of cost. So that if we were to go ahead with these standards as they are now on the books, we are talking in the area of $1,000 per vehicle when all of those standards are met.

Those costs do not take account of some of the other penalties, that is, the fuel penalties that may be associated with meeting the

weight or the emission standards on the cars in the future. And there may be other costs.

Now those figures, I think, we have made public but, I think, there are other costs involved in this and I agree with you. One of the things I would like to see is a much fuller accounting.

Senator BROCK. My time has expired, Mr. Chairman, but if I might ask for the record so you could supply it at your convenience, would you give me a breakdown, by company, each of you, a listing of the mandated costs current and already enacted but not being applied yet and those which are proposed by type?

How much does the 5-mile-per-hour bumper cost, not just in terms of the consumer, gentlemen, if you could give me a little clearer estimate of what it costs in increased repair bills because my son is not smart enough to wreck at less than 5 miles an hour and that is a genetic defect he has to live with. We have that problem too.

I would like to be able to spell out the exact cost by item, not individual, part by part, but by the major system item. If you could give me that I would be very thankful.

Mr. ESTES. The other thing, Mr. Senator, we have tried to do in this, and it is a little more difficult, and that is to rate the cost benefit in each of these. But that is really what you are talking about—is the 5-mile-per-hour bumper worth it? We have testified many times that the 2½ is but the 5 is not. But that is the kind of information we will try to get for you.

Senator BROCK. Thank you very much.*

The CHAIRMAN. Mr. Curtis?

Senator CURTIS. Thank you, Mr. Chairman.

Personally, I happen to believe that our present trend in our legislation here, what has been proposed are a blueprint for a continuation of unemployment and recession. Now, we can eliminate some drivers whether we raise the age limit or not. We can do some other things, we can close some filling stations, we can go to the very, very small car. But I am concerned about what that means in the way of jobs and I do not think we have to do those things.

I would like to ask, how many man-hours are involved in making your smallest car? I will ask Chrysler first, or is it a trade secret?

Mr. LOOFBOURROW. I do not have that specific information at my fingertips at the moment, and this would have to go clear back to the raw materials as they lie in the ground, if you want to really get the total man-hours involved.

Senator CURTIS. I will come to that, but I think we ought to know if it is a trade secret exactly how many man-hours—I would like to know something between the difference over the man-hours that goes into one of these smaller cars and one of these full-size cars.

Mr. LOOFBOURROW. Within our plant, there is a substantial difference.

Senator CURTIS. How much?

Mr. LOOFBOURROW. I will get that information.

Senator CURTIS. Do you not have a guess?

Does it take twice as many people to make a full-sized car than one of these little bitty ones? Because, if that is the answer, we can all go to motorcycles or these three-wheel things or rickshaw carts.

*The information referred to was not available at presstime. In order to expedite the printing of these hearings, the information requested will appear in appendix B of these hearings.

How about the Ford situation?

Mr. SECREST. In answer to your specific question, Senator Curtis, I would estimate—and I do not have detailed information on the subject with me—that the man-hour content of a Pinto, in the Ford system, is about 15 percent less than the manpower content of one of our larger cars.

You might think it is a great deal wider difference than that, but the fact is that the Pinto will perform many of the functions that a large car will perform, and we cannot find smaller people to build the smaller cars.

Senator CURTIS. You can put some of those small people into politics, though.

About 15 percent?

Mr. SECREST. Yes.

Senator CURTIS. What is your comment on that?

Mr. ESTES. Well, I do not have the numbers here, but it is not 50 percent, I will say that. I do not think Mr. Secrest is far off—it really depends on where you start. If you start at the assembly plant, that is one thing; you go on to the engines, the axles, and so on, back to the raw materials, you can go all the way through.

Senator CURTIS. I mean the whole business.

Mr. ESTES. I think 15, 20 percent is probably a good figure.

Senator CURTIS. Now, if you went clear back to the raw materials, all the raw materials that go into a car, how much employment do we lose by going to these tiny cars, as compared to what most of us think of as a full-sized car?

Mr. SECREST. I think one way to get at that would be to consider some of the optional equipment features that are now available in most cases on either small or large cars. Some of them, like air conditioning, are alleged to have—you know, there is a whole industry that could be disemployed. I assume it would involve not only automotive air conditioning, but air conditioning for buildings and Senate hearing chambers and everything else. And if we have to do that someday, I assume we will do it.

Senator CURTIS. I do not think my question is difficult. Does it take more people to build a full-sized car or a small one, and if so, how much more?

Mr. ESTES. It is a good question. I think we should consider it and try to get some kind of an answer on a percentage basis. I do not think we have—I know we do not have the information here to give you the kind of answer you want. I think the thrust of our testimony, however, though, Mr. Senator, was that in addition to the factor you are talking about, there is a possibility of postponement for an indefinite period, maybe up to 5 years, of buying intentions on the part of the public, which is going to be tremendously severe in the way of unemployment in the interim.

Senator CURTIS. That is exactly what I am getting at. What will the effect on the industry be on employment if we force you to go to a 28-mile-per-gallon average?

Mr. ESTES. We are talking about 2,000-pound cars.

Senator CURTIS. What is it going to do to employment?

Mr. ESTES. It is going to have a drastic effect, as Mr. Duncombe said.

We say that even in 1980—and that is not the 28 miles per gallon, that is the 20.5—we are looking at probably a million less vehicles in the industry, sales, in 1980, because of the 20.5 number.

Mr. DUNCOMBE. And that is about 250——

Senator CURTIS. That is the sales of cars.

Mr. DUNCOMBE. That is 250,000 people.

Senator CURTIS. That is 250,000 people, but how much is going to the smaller cars?

Senator BROCK. Excuse me, that is 250,000 direct; and what would be the indirect?

Mr. DUNCOMBE. The indirect in various——

Mr. ESTES. That is 1 to 4, and it gets up to the point where it is almost 1.5 to 1; so you almost can double 250,000 if you are talking about supplier industry and the whole thing. The 250,000 is just General Motors.

Senator CURTIS. What I would like to know is, in the whole ball of wax, I think the Congress ought to know, how many man-hours it takes—or if it is a trade secret, put it in some other way—to make a small car and how much to make a full-sized car, clear from scratch. I think we ought to know that.

I think we also ought to know whether or not you could pull a boat or a trailer with these little cars, and who is buying the boats and the trailers. I do not think the wealthy people. I am serious; I think this movement has got the seeds of making our recession and unemployment permanent. I do not think there is any question that we have got to turn our attention to the production of more petroleum and natural gas in this country, and our conservation should be turned to a question of those industries where there is a substitute.

Now, if they did all the things they have talked about under these schedules here, would it save as much petroleum as we would save by using coal instead of petroleum to produce our electricity in the country? It is my understanding we use about—that 40 percent of the electricity is made by burning petroleum. It is not necessary at all; coal is cheaper. Now, what would be the comparison if we did all of these things that they want to do, which I am convinced means continued recession and unemployment, because our industry, our whole industry is built around the motor vehicle.

There is another thing we have not touched here and that is trucks and the like. If you make them smaller, you cannot haul very much.

Would we save as much petroleum if we eliminated petroleum as a means of manufacturing electricity? Does anybody have an answer on that?

Mr. ESTES. We have looked at this. I do not have the numbers at my fingertips.

Senator CURTIS. I would be glad to have it supplied for the record. I do not mean any harsh criticism of not having these ready answers, but I believe you have been too defensive. You have been stepping backwards as we in the Congress have imposed this managed economy—and that is what it amounts to. Congress business should be to see that we produce more petroleum and also a full utilization of substitute fuels.

Mr. DUNCOMBE. I was just going to suggest in connection with this that the motorcar is taking about 30 percent of the petroleum. Now, a proposal such as we have been discussing today would affect only new cars. And let us say for a moment that it did not affect the sales volume. We have 100 million cars on the road, so that what this legislation would be doing would be affecting, let us say, 10 percent; that is, the first year's production would be 10 percent of the total. So that, of the 30 percent of fuel, we would be affecting 3 percent. Now, of that 3 percent, we might be making a 5-percent improvement, so that we are talking now about a first-year improvement in conservation of 5 percent of 3 percent of the total petroleum used in the United States.

What we are talking about here is a proposal which will have a major effect on the automobile industry and a minimal effect on our national effort to conserve energy. That is one way of looking at it.

Senator CURTIS. Well, now, we use 30 percent of our petroleum to drive motor vehicles. And how much do we use, or what percent of our petroleum do we use for electricity?

Mr. ESTES. Nine percent.

Senator CURTIS. How much?

Mr. ESTES. Nine percent.

Senator CURTIS. Nine percent.

Mr. ESTES. If you eliminated all of that, it would be a 30-percent improvement.

Senator CURTIS. If you eliminated all of that you would conserve 9 percent of your petroleum.

Mr. ESTES. About one-third of what we are currently using for automobiles.

Senator CURTIS. And if we put you through the mill on this thing and change our whole economy, because I do not think it takes an expert to figure out that these little cars cannot pull boats. If you cannot pull them, they are not going to buy them. There is an industry. The same thing is true with trailers. I think it is our middle class people that are using those things. The boat industry has been one of the most rapid growing ones. But by producing electricity with coal, we could save 9 percent of our total petroleum usage. And by all of these things in the automobile industry we would save 3 percent.

Mr. DUNCOMBE. Less than 3 percent.

Senator CURTIS. Less than 3 percent.

Do you think that if 5 or 10 years from now there is a massive move to very small cars, if it is accomplished by then, that you will be employing as many people as you would be if you were still selling full-sized cars?

Mr. ESTES. No; no question about that.

Senator CURTIS. I am sure that every where you follow along, that the insurance industry is cut down proportionately, the financing of cars is cut down proportionately, and all of the component parts, as well as its effect upon these other things. And I just believe we are facing too grave a situation in reference to our energy supplies to waste time talking about these things, that when it is all said and done, we do not change the picture very much. And this energy crisis has been with us now for almost 2 years and the Congress has not done anything to increase the production of petroleum by a single

point. As a matter of fact, they have gone the other way. The production of oil has gone entirely down.

I will not take any more time. I do have some questions here that I would like to submit for the record along this line that I have been asking, and that will give you a little more time, relating to the employment situation. I would like to have that supplied to each one of the witnesses.

Thank you, Mr. Chairman.

The CHAIRMAN. Without objection, that is agreed.

[The response of General Motors follows. The responses of the other two witnesses had not been received at presstime. In order to expedite the printing of the hearings the information requested will appear in appendix B of these hearings.]

QUESTIONS ASKED BY SENATOR CURTIS TO GENERAL MOTORS

Question. If the House bill becomes law, what effect would it have on employment in the auto industry?

Answer. Establishing mandatory fuel economy standards, even as high as 20.5 mpg which H.R. 6860 mandates for 1980, could have substantial adverse effects on auto sales and employment in the auto industry and throughout the economy. This would happen because, even at the 20 mpg level the kinds of cars automobile manufacturers would be able to build in response to consumer demand would be restricted.

H.R. 6860 would require standards as high as 28 mpg in 1985. It is difficult at this time to speculate over what kind of cars could be produced in 1985 to get a 28 mpg average. No car presently being built in the U.S. achieves 28 mpg on the composite EPA cycle. It is certain that there would have to be very many small, very light-weight cars sold. If half a manufacturer's fleet consisted of cars averaging 24 mpg (the best mileage for a low performance 1975, 3,000 lb. car) the other half of the fleet would have to average about 34 mpg. It is important to recognize that *no* car, domestic or foreign, (even the lowest performance manual transmission cars) presently being sold in the U.S. achieves fuel economy as high as 34 mpg on the composite cycle.

While cars that can attain fuel economies in the range of 28 mpg can be designed and built, there is no assurance that they can be sold in sufficient numbers to avoid substantial disruption and unemployment in the automobile industry.

At this time it is not realistic to speculate on the magnitude of the unemployment that would be generated by any particular standard a decade in the future. One thing, however, is certain. If the American people demand 28 mpg cars, it is in the best interest of the automobile companies to meet that demand. If they do not demand cars of the kind but the auto companies are forced to limit their production to such cars, the effect on the economy could be catastrophic.

Question. What impact will current emission standards have on your ability to meet the fuel economy standards in the House bill?

Answer. GM has indicated that we can achieve a 53% improvement in auto fuel economy between 1974 and 1980, provided there are no additional fuel economy penalties imposed by emission standards and safety standards more stringent than those applicable to the 1975 model year vehicles. Any more stringent emission standards would make that goal extremely difficult, if not impossible to reach.

GM has informed EPA and California officials that we will attempt to meet that state's standards in 1977 and "we intend to market 1977 models in California in as many size and weight categories as we can under the regulations, recognizing that some current engine/transmission combinations now being offered in California may have to be dropped."

GM has added further that we expect fuel economy penalties of approximately 20 to 25% to result from meeting California's 1977 emission standards.

Present levels of emission standards currently required by law for the 1978 model year nationwide are more stringent than the 1977 California standards.

Neither GM nor, to our knowledge, any other manufacturer has the technology in hand to meet these 1978 emission standards. Until the technology is developed, we can not reasonably estimate the fuel economy penalties.

Question. If there are fuel economy standards, should they be applied to an entire car fleet, or should penalties be applied only to the low mileage cars?

Answer. Proposals have been advanced before the Senate Finance Committee to apply penalties only to low mileage cars rather than to a manufacturer's entire fleet. One approach would be to tax cars at a rate based on the fuel economy they achieve in relationship to the industry-wide sales-weighted average for that model year as determined by the Environmental Protection Agency in its certification tests.

While a tax on low fuel economy cars is unnecessary because of the voluntary efforts being made by the auto manufacturers to improve the fuel economy of their cars, this system would be much more fair than the penalties under H.R. 6860.

Question. Is it "too early" to tell what fuel economy standard can be met in 1985 and whether any standard will in fact be needed?

Answer. We believe it is a serious mistake for Congress to set standards by legislation. It is particularly inadvisable for standards to be set as far as 10 years in the future when conditions, economic forces and the state of the technology can not be foreseen. It is apparent that the post-1980 standards in H.R. 6860 are arbitrary and unsupported by analysis of the way in which they will affect energy consumption or the American consumer.

As a result of fuel economy improvements now being made in response to consumer demands brought about by higher gasoline prices, total gasoline consumption for all cars on the road will decline between now and 1980. There is no other energy consuming sector of our economy that is approaching this "negative energy growth." If there were, our country would be well on its way to solving its energy problems.

Certainly there is no justification for these entirely arbitrary standards presently written in H.R. 6860.

The CHAIRMAN. I apologize for my absence. I had to leave this meeting briefly to attend the Democratic caucus which is meeting on various and sundry matters.

Senator CURTIS. Did they cut down our supply of oil any this time?

The CHAIRMAN. My purpose for attending was to try to protect the right of this committee to recommend a bill in line with whatever the evidence and the good judgment of its members would dictate.

Senator Gravel has made available to us a recent summary of the Harris Poll which indicates that a 46-to-31 percent plurality of the American people now favor "deregulation of the prices of all oil and natural gas produced here." And that was a reversal of a previous poll taken July of last year, when 42 to 28 percent opposed deregulation.

Over the last 10 years, has the price of oil gone up much more relative to the price of the automobile?

Mr. ESTES. These increases have been sporadic, so I do not know if I know the answer.

Mr. DUNCOMBE. The real price of oil went down, as you know, pretty regularly up until the time of the embargo. The big change in the oil prices comes since then. I think that gasoline and oil products in the United States, without a doubt, up until the time of the embargo, were one of the Nation's biggest bargains. We had them underpriced.

The CHAIRMAN. I think that the evidence before this committee is going to show that you cannot replace the existing oil and gas at the price that the producers are being made to sell it for. In other words, the producer who is selling his oil for $5.25, in due course will be

made to buy energy from a source, be it oil or coal or whatever, and he will be paying at least twice that when he buys for his own needs in the future, because the replacement cost of energy just greatly exceeds the regulated prices.

Now, it looks like the American public now understands something that a lot of our fellows have not quite realized. The public knows it is not within our power to deliver them cheap energy indefinitely without taxing their eyeballs off of them to pay for it with tax subsides. An overwhelming majority is now tired of being misled by politicians who believe they can buy energy cheap indefinitely. There is some cheap energy now, energy which was found when it was much cheaper to produce it. But from here on, you are going to have to pay what it costs to produce the energy. And when you pay what it costs to produce it, you will find a lot of people who are ready to go produce it, providing that they can make the profit that they would expect that they would if they invested their money in something else.

Now, few people are greatly upset that they have to pay a great deal more to buy an automobile than he had to pay 10 years ago.

But I do think in the long run the public would like to decide for itself whether it wants to buy a big automobile, a small automobile, an air-conditioned automobile, or one that is not air-conditioned, as the case may be. And they would sort of like to decide for themselves whether to drive the automobile 65 or 70 miles an hour on interstate highways or whether to be held down to 50 miles an hour or 55.

And I take it, basically what you gentlemen are testifying for is that you ought to let the free enterprise system work.

Mr. SECREST. Precisely.

Mr. ESTES. Right, and it will do it, too.

The CHAIRMAN. And in the last analysis, no matter what we politicians promise the public, we are not going to be able to provide the public with energy much cheaper than it costs to produce it, are we?

Mr. ESTES. That is right.

The CHAIRMAN. I have no further questions. I may want to submit some, and I would appreciate it if you would respond to them.

Any further questions, gentlemen?

Senator HASKELL. I have just one, Mr. Chairman.

Mr. Secrest, you mentioned that it took about 15 percent more manpower to manufacture a big car as opposed to a Pinto. Can you give a rule of thumb relating to the material costs?

Mr. SECREST. Well, I think in materials, Senator Haskell, kind of thinking off the top of my head, you will find——

I guess I would have to say if a 5,000-pound car were reduced to 2,500 pounds, either due to the pressure of the market or to the law——

Senator HASKELL. No, I meant your present line. In other words, your Pinto. What is the material cost of your Pinto as opposed to the material cost of your Ford suburban station wagon?

Mr. SECREST. I think the material cost is going to be very, very proportional to the weight of the car. A Ford car today will probably weigh 4,000 pounds or more—4,000 to 4,500 pounds. It will weigh much less than that in the future. A 2,500- or 3,0000-pound car will have a basic material cost that I think will be roughly proportional to the difference in weight.

Senator HASKELL. So, your Pinto is what? 2,500 pounds now?

Mr. SECREST. Well, today's Pinto is closer to 3,000 pounds.

Senator HASKELL. 3,000 pounds.

And just to take the top of the line, your Lincoln Continental is what?

Mr. SECREST. It is 5,000.

Senator HASKELL. So it is a ratio problem.

Mr. SECREST. Sixty percent of the weight and probably 60 percent of the underlying basic material cost—so there would be a very significant difference in material, labor.

Senator HASKELL. So, if you had a 5,000-pound car versus 2,500, the material cost would be twice as great? Is that roughly a rule of thumb?

Mr. SECREST. I think that is right.

Mr. LOOFBOURROW. It is probably slightly biased upward for the larger car.

Senator HASKELL. Roughly in relationship, if you have twice as heavy a car, your material cost is twice as much?

Mr. SECREST. I think to take the weight out, you have to take out material. I think you would come out close to that, not necessarily exactly.

Senator HASKELL. That is all.

The CHAIRMAN. Are there further questions?

Gentlemen——

Senator TALMADGE. I would like to ask one or two, if I may, Mr. Chairman.

Senator Ribicoff, as you recall, asked you some questions about diesel automobiles. I believe the efficiency of the diesel engine is almost twice as good as the gasoline engine, is it not?

Mr. ESTES. No. On the basis of Btu value, Senator Talmadge, the difference gets down to about 10 percent, because the Btu or the energy value of diesel fuel is higher than that of gasoline. So, if you look at it on a Btu basis, energy unit basis, the diesel is only about 12- or 13-percent better. On a miles-per-gallon basis, it is about 20- to 25-percent better. I am talking about everything else being comparable.

Senator TALMADGE. Is it possible to produce a diesel automobile within the purchasing power of the average American?

Mr. ESTES. So far, there is a penalty—if we look at the marketplace, there is a penalty for the diesel engine over the gasoline engine somewhere in the area of $100 to $200, $250, depending on the size.

Senator TALMADGE. In other words, if you put all diesels in your General Motors cars, it would cost you about $150 to $200 more per automobile?

Mr. ESTES. Per car; right.

Senator TALMADGE. Suppose Congress passed a law and said, give you enough leadtime to do it and gear up for it, that all automobiles had to be powered by diesel engines. How much petroleum could be saved?

Mr. ESTES. I guess we would need to do a little figuring. You are replacing about a 10th of the vehicles each year, so that has to be put into the formula. I think we really ought to take a look at answering, Senator Talmadge.

Mr. LOOFBOURROW. The yield of fuel oil from crude is such that if you have all of the automobiles as diesels, there simply is not enough crude oil to supply them with diesel fuel, and you would have gasoline as a leftover byproduct that you would not know what to do with.

Senator TALMADGE. In other words, you would have to have gasoline made in order to make the diesel fuel?

Mr. LOOFBOURROW. That is right.

Mr. ESTES. We asked all of the oil companies individually, recently, how do we get the most transportation, the highest number of miles out of a barrel of crude. I think that is what we are talking about.

Senator TALMADGE. That is correct.

Mr. ESTES. And we have had various answers, and I think there are various answers depending on the refining capability and the refining capacity of the industry, spread between the various suppliers. We have had answers all the way from the fact that our current mix is about the optimum, up to the point where it would be better to have, let us say, a multifuel engine. Now, that is kind of a simplistic and easy answer to the question. If you have a multifuel engine which will burn any kind of fuel, obviously as the mix changes in the various refineries, we get a little more. But in an optimum basis, I think we have a possibility, maybe, of picking up 10 percent in this area by gearing our engines to the current capacity and the current heat value of the crude oil.

Senator TALMADGE. Do any of you gentlemen have any idea how much petroleum and gasoline we could save if we vigorously enforced the 55-mile-an-hour speed limit?

Mr. ESTES. I think we said, when the 55-mile-an-hour limit came in, if it were enforced, as compared to a 70-mile-an-hour limit, I guess, that was general at that time, we were talking about a 15- to 20-percent fuel savings.

Senator TALMADGE. That is about what I get on my own automobile.

So if we save 15 to 20 percent of 5 to 6 million barrels a day, that would be a considerable savings, would it not?

Mr. ESTES. I think maybe—Mr. Duncombe reminds me—that that is while driving at 70 or 55, and when we look at the overall picture, since a lot of the miles are driven in city operation and maybe only 15 or 20 percent out on the highway, that that figure probably comes down in the area of 2 to 5, maybe. I think that would be a better figure.

There is a savings on the highway when you are driving 70 versus 55 of maybe 20 percent.

Senator TALMADGE. Would you give us the best guess that you could, and supply it for the record, if we vigorously enforced the 55-mile-an-hour speed limit, how much we would save?

Mr. ESTES. I would like to give you that later. I would rather do it a little more accurately than just to take it off the top of my head.*

Senator TALMADGE. All right.

And let me give you another thought. It seems to me if we canceled courtesy cards, there would be an enormous savings on gasoline. What is your feeling on that?

Mr. ESTES. I guess I have to have a definition of a courtesy card.

Senator TALMADGE. Credit cards.

Mr. ESTES. I do not know. That is an economic question.

Mr. DUNCOMBE. That is a petroleum economic question.

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*The information referred to was not available at presstime. In order to expedite the printing of these hearings, the information requested will appear in appendix B of these hearings.

Senator TALMADGE. I know if you go on the high school campuses and the college campuses you find acres and acres and acres of automobiles. Young man or woman usually has a credit card that the parent pays for on a monthly basis. I believe if they had to pay for it out of their allowances, we would find those automobiles operating less. Would you agree with that?

Mr. DUNCOMBE. I can confirm that by personal experiment.

Senator TALMADGE. I have had lots of interesting experiences along the same line, I may say.

Then how much could we save if we closed the filling stations on Sundays or weekends?

Mr. SECREST. We got some evidence on that, I think, during the embargo, and also in some of the European countries, where they in the past followed Sunday closings and so on. It is a feasible method, although in my judgment it is a method more suited to dealing with temporary supply emergencies than as a long term.

Senator TALMADGE. Would you supply that for the record?

Mr. SECREST. Yes, sir.*

Senator TALMADGE. It seems to me we must mandate some vigorous conservation methods, and it seems to me that the easiest and simplest would be to enforce the 55-mile speed limit, close filling stations on Sundays, cancel credit cards; and I believe that would have less effect on unemployment than most any program we could adopt, I believe it would work because it is simple, it is practical. The people would understand it. And if you closed filling stations on weekends, it would make the people realize that we are in an emergency, and I think they would react in other conservation methods accordingly. As long as they can drive up to a gas tank and buy all of the gas they want, as long as the money holds out, there is no sense of emergency or crisis whatever, as I see it.

Mr. SECREST. Of course, there is another advantage to moves of that kind. They can be instituted almost immediately with very little lead time, and if they do not work, they can be eliminated without any enormous capital waste; whereas some of the other remedies that we are grappling with, if they turn out not to work, if we have converted the whole industry to build, let us say, the Questor car or one of these other propositions and it does not work, we cannot go back, because we have used all of our money to try the first alternative.

Senator TALMADGE. That is correct.

I have no further questions, Mr. Chairman.

The CHAIRMAN. Senator Packwood.

Senator BROCK. Gentlemen, I ask the Senator to yield because I have to leave for a few minutes, and I will try to get back.

I want to say how much I appreciate your testimony. I would like to ask you one question that you might speculate on for me for the record, and that goes back to another personal problem with my kids and dogs. Driving this full sized wagon back and forth to Tennessee or whenever we want to go on a trip, if I am required to cut that vehicle back to a 2,500-pound car, what is it going to do with my safety problem?

*The information referred to was not available at presstime. In order to expedite the printing of these hearings, the information requested will appear in appendix B of these hearings.

Mr. ESTES. Well, I guess there is nothing we can do about the physics book, and the physics book says you are going to have more difficulty with the 2,500-pound car against a 5,000-pound car.

Senator BROCK. Can you meet our emissions standards and our gasoline consumption requirements for 1985 with a 2,500-pound car that will seat six adults and give them safety?

Mr. ESTES. I think we have said that with current technology it is next to impossible to do the first part of that, to carry six people comfortably.

Senator NELSON. I might say that I have looked at the EPA standards, and here you have got the Volkswagen bus which will hold Senator Brock, his two dogs, his wife, his two kids and Senator Packwood's family, too. And that one gets 18 miles per gallon in the city and 25 miles on the road.

Senator BROCK. But it does not do 28 miles, Senator.

Senator NELSON. No, but that is much bigger than you need. You do not have to take Packwood's family with you every time you are traveling.

Now you have got the Dasher wagon, which does 23 in the city and 35 on the road. Now I drove the Dasher wagon last weekend——

Senator BROCK. It does not seat six, Senator.

Senator NELSON. Yes. It would take your children, your dogs, everything else. I drove it last week. Now if you take out the bucket seats and had a straight seat across, it sits six easily. As a matter of fact, all this talk about the space inside, the space inside a Fiat is about the size of a Seville. Just take the leg stays——

Senator BROCK. I do not have a Seville and I have got growing children. They still eat.

Senator NELSON. What is all this nonsense that none of this can be done without having a huge monster on the road? It is just plain nonsense and I think we are dealing with bandaides on a very important problem.

Senator PACKWOOD. Mr. Chairman, I have some more questions of these witnesses and I have read the other statements. What is your plan? Are you going to go right straight through? Or are you going to come back?

The CHAIRMAN. We have other witnesses to be heard and I would hope that all Senators would ask the questions that they feel must be answered, here at this time, and then that those that could be submitted, that they would be willing to submit that.

Senator PACKWOOD. Is it your plan to take the other witnesses straight on through? Are you going to break?

The CHAIRMAN. I am planning to hear every witness we have scheduled to hear today.

Senator PACKWOOD. Now?

The CHAIRMAN. Not right now, but before the day is out.

Senator PACKWOOD. That is what I am trying to get at. Are we going to break for lunch or anything? Are you going to go to 1:30? Or 2?

The CHAIRMAN. I think we ought to conclude the questions we are going to ask these witnesses in their testimony here today, and then if you want to go ahead proceed with others go right on ahead.

Senator PACKWOOD. I sensed, when you were responding to Senator Curtis' question about employment and his effort to say how many people would be unemployed if we make smaller cars, that is not really a significant factor in your thinking? I judged that from your answers.

In 1985, if you are mandated to have a 28-mile-per-gallon standard, then you are making nothing but 2,500-pound cars. You will not have significantly fewer people than we have now employed, assuming sales hold up? Is that correct?

Mr. DUNCOMBE. If we accepted that 15 percent, rough ballpark figure, 15 percent unemployment rate would be almost unprecedented. We are concerned today about unemployment rates that run in the area of 6 to 7 to 8 percent, and here if we are talking about unemploying 15 percent of this given segment, I think you and I would both agree that this is a significant number.

Senator PACKWOOD. I just want to know if that is what you are saying, that in 1985 if you have 28-mile standards and a 2,500-pound car, and sales are running fine, you will employ about 15 percent fewer people?

Mr. DUNCOMBE. That was a horseback figure, I believe, was it not, Mr. Secrest?

Mr. SECREST. Yes. I do not want to say that 15 percent is the answer to that question, Senator Packwood.

Senator PACKWOOD. What I am getting at is that it does not seem to be a factor so large in your thinking that it is of a major concern?

Mr. DUNCOMBE. It is dwarfed by the other considerations of the volume impacts.

Senator PACKWOOD. OK, because in all of the answers about the effect, you have always premised this—you have brought your estimates down from 17 to 16 million. It is always premised on the fact that people are going to postpone or they are not going to buy. It is a sales answer that you relate to employment, not a production answer?

Mr. DUNCOMBE. That is true.

Mr. ESTES. That is true.

Mr. DUNCOMBE. They are both in there. As I say, the market aspects of this problem in our minds have dwarfed the other aspects of the problem.

Senator PACKWOOD. In response to Senator Long's comment awhile ago, he said we ought to let the market take care of this. Mr. Estes, you responded, "that's right, and it will".

And yet in your answer just a few moments ago, or about an hour ago now, you said, "as far as safety and emissions were concerned, the market would not take care of themselves." They were not "salable items". If they were not mandated, you would not put them on.

Mr. ESTES. The word "mandated" is kind of strong, but we think we need regulation in the areas—we have taken this position continuously, that if the regulations in the area of safety and emissions are health-effective, cost-effective, and energy-effective now, sure, that is the way it should be done.

We have proven this in the past——

Senator PACKWOOD. As I understand, you tried seatbelts at one time—it was not you, it was Ford—in the 1950's and they would not sell, and you took them off?

Mr. ESTES. That is right. It was a long time ago.

Senator PACKWOOD. But, I mean it did not work.

Mr. ESTES. We are offering the air bags today, passive restraints.

Senator PACKWOOD. And very few people buy it.

Mr. ESTES. We have only been able to sell in a year and a half about 6,000.

Senator PACKWOOD. I agree with you and I understand you have to mandate it, and you just mentioned energy now. This is what I am curious about.

Mr. ESTES. To be sure they are "energy-effective," I said. Whatever these regulations are, we have always said "health-effective" and we have always said "cost-effective." And now we think more important than ever before, "energy-effective" should also be included. And that gets into the weight of the vehicle and the energy consumed by the emissions system and so on. All of these things have to be balanced. It is a difficult balance we are trying to reach and I guess all we are asking Congress to do is to take a good look at it in this respect, to try some of these things on a trial basis to make sure that we do not go way overboard and to do everything possible to get all of the field and engineering information we can on these things. Do they work? Is it accomplishing what you want to accomplish?

We are all trying to get to the same place, with regard to all three of these factors. We are all trying to get there. It is a method of how we get there.

Senator PACKWOOD. Assuming, as a matter of policy, we wanted to get to a 28-mile-per-gallon car. Would we get there with market forces alone?

Mr. ESTES. Well, it would have to be—we think it would have to be evolutionary, if that is the word that is required. We think market forces can move us in that direction, but it is going to take some time. We are going to have to take a good look, technically, at how we accomplish the transportation needs of Senator Brock and others in that category, as well as you, Senator Packwood.

You have a different requirement than Senator Brock. We have got thousands and millions of customers out there, all with a different requirement, and we are going to try to meet it.

Senator PACKWOOD. I come down on Senator Nelson's side on this. I do not think I am counting myself, and I do not mean to count the public. I realize there is a tradeoff. I am not going to get in a Dasher what I get in a Buick, and I am going to pay less money for it and I will get better mileage and it is not as comfortable. Maybe it does not have air-conditioning.

But, as a matter of policy, if this Congress thinks that that is the way this country must move, will we get there in 10 years, by market forces? Or must it be mandated in order to get us there?

Mr. ESTES. We say the market forces are going to get us there. What you are talking about, really, are your constituents and what they want and what they need and how well they recognize the problem and how do we convince them.

Senator PACKWOOD. We never convinced them to have seatbelts until we finally mandated it.

Mr. ESTES. Well, seatbelts and fuel economy are two completely different animals here. There is not any question but that the economic

forces are telling us and the customer is telling us that fuel economy is a salable item. I said that in the beginning. It is almost the exact opposite, with safety and emissions standards, as far as our average customer is concerned.

Senator PACKWOOD. But your answer to the question is, if we want this 28 mile fleet average as a policy to be achieved by 1985, you say that it will be achieved by market forces and you will make it and that is what the market will demand in 1985?

Mr. ESTES. Well, if it is really required, and the constituency and the country and everybody agrees and our energy situation is such that it has to be, we will get there in a normal way, yes, sir.

Senator PACKWOOD. I have no other questions.

Mr. LOOFBOURROW. Senator Packwood, may I address myself to that thought for just a moment? I think the important thing, basically, is the matter of the conviction of the public and what they believe to be necessary for this country.

If they believe that the 28-miles-per-gallon is absolutely necessary for this country, then the free market will see that we get there.

Senator PACKWOOD. If they do not believe that it is necessary, then what?

Mr. LOOFBOURROW. If they do not believe it, and the industry tools up for 28-miles-per-gallon automobiles, you have a disaster on your hands.

Senator PACKWOOD. Right, but if the public does not believe it, we are not going to get there by market forces.

Mr. LOOFBOURROW. If they do not believe it, you are not going to get there by regulation either.

Senator PACKWOOD. Why?

Mr. LOOFBOURROW. Because they will not buy the product and you end up with a chaotic condition in the industry.

Senator PACKWOOD. That is where we disagree. You are saying that if we mandate it and they do not like it, when 1985 comes they are not going to buy any cars or they are not going to buy very many cars.

Mr. LOOFBOURROW. That is right.

Mr. ESTES. We will have another interlock.

Senator PACKWOOD. And they will stop buying cars for years?

Mr. LOOFBOURROW. Is the Congress of this country going to force these people to buy these automobiles?

Senator PACKWOOD. We forced them to buy them with seat belts.

Mr. LOOFBURROW. You did not force them to use them. You force them to buy them. It is a relatively small purchase price; but you do not force them to use them.

Senator PACKWOOD. We are forcing them to use the emission devices.

Mr. LOOFBOURROW. That is right. They have no choice in the emission devices and they cannot avoid the fuel economy they cannot get because of the controls. When they buy fuel economy, they are buying something that they cannot avoid using and they will buy something they think fits their particular requirements.

If you can convince the public that this whole country has to be riding around in 28-miles-per-gallon automobiles, and really convince them, they will buy them. But Congress had better make sure that they have got them convinced

Mr. ESTES. Senator, I do not want to be facetious, but the interlock is a typical example of what we are talking about.

Senator NELSON [presiding.] The what?

Mr. ESTES. The "interlock." Congress went home for recess, and bang it was gone. It cost us $200 million in the industry, at least in General Motors, to find out that the customer would not accept it. It was a great safety device. The customer had to buckle his seat belt before he started the car.

Senator NELSON. Do not blame Congress for all of that. That was the executive branch. We did not write in the statute that you had to have an interlock, and there was not a single word of debate in either House of the Congress suggesting it was so.

Mr. ESTES. I have not heard a word about it since.

Senator NELSON. No, no. Congress did not like what the bureaucracy did. If you read the statute, and the debate on the floor of the Senate, you won't find a single Member of Congress who ever thought that the regulatory agency was going to say you have to have an interlock. So we passed the statutory requirement that you could not have it.

Mr. DUNCOMBE. We just want the Congress to avoid making the same mistake the administration made.

Senator NELSON. I must say, I realize that, of course, it is not the auto industry's primary function, or any other business' primary function, to make social policy. But what interests me is that all of the conversation I hear, and all of the debate on this that I hear, both talking individually and listening to testimony at hearings, is that the public and industry and business and all the editorial writers all over this country, the New York Times, the Washington Post, the Washington Star, my Milwaukee Journal, all over the country they are saying you have got to do something about the energy crisis.

And every single industry that comes before Congress says, "fine, but don't mandate anything for us." And then all of our constituents say, "do something and do it fast, you stupid jerks, or go home; but, don't inconvenience us, and don't increase the price of anything."

So, we have got a situation where everybody says, "do something to meet this terrible crisis, you fellows down there, but don't do anything to inconvenience us." Now I understand your position, but the fact of the matter is, and this is what dismays me, that this is not a crisis, it is a disaster. And what dismays me more and that what amazes me even more, is one of the Senators here referring to this "recent crisis." This crisis has been here right along with cars. Twenty-five years ago, men like Harrison Brown and Julian Huxley, were predicting it. Industry paid no attention. Government paid no attention. No President ever gave a speech on it. A handful of people talked about it; and now it is here.

It is not a crisis that you are going to solve in 5 or 10 years. It is a matter of at least 20 years. And the automobile is a significant part. I think it is perfectly clear that you can build a car as big as Senator Brock wants and you can still get the mileage. In fact, you could double the average mileage of all of our automobiles.

But you are not going to do it without mandating it. Now the idea that the public would not buy it is nonsense; if that is all there is, that is what people will buy. And, if somebody happened to be a buyer of

big cars all his life and now he has got to have a new car, and all there is is the high-mileage, lighter car, that is what he will buy.

Now in none of these areas is the public, the Congress, or anybody else, it seems to me, addressing himself to it in any significant and dramatic way. Our automobiles are just part of the problem, but if all the automobiles in this country got twice the average mileage we now get; if the whole mix of cars got twice the average we now get, that would be a saving of almost 40 billion gallons a year. We are using about 78½ to 79, so it would amount to almost 40 billion gallons a year. That would be equivalent to 1½ Alaska pipelines forever.

Now that is dramatic. That is significant. You are not going to get it by this play in the marketplace stuff. That is all there is to it. So I think you are going to have to bite the bullet and be tough about it.

And that does not only apply to automobiles, it applies across the board to activities in the conservation, the utilization of energy. Now this is a very important problem. It may be one that we cannot resolve.

And yet it is not as tough as what is coming right next, on its heels, and that is shortage in metals, fibers, and proteins, and we are doing nothing about them either.

So all I hear is testimony from people who want us to use some Band-Aids and not disturb their way of life, or the way they act. All I say is, it ain't going to work. It just ain't going to work.

Now you in the auto industry may prevail, as I suspect you will this time, because I think that is what most of the public thinks and what most of the leadership of the country thinks, but it just ain't going to work. We are going to be in one hell of a mess, worse than this, 10 years from now, and that is all there is to it.

We will adjourn until 2 o'clock, unless you want to comment. [General laughter.]

Mr. ESTES. That is the last thing we need to comment on.

Mr. LOOFBOURROW. I would like to make one comment. One thing that has never been mentioned in any of these bills, that involves fuel economy. The name of the game is conservation, right? And there is nothing in these bills that would cause the foreign manufacturer making that small car to make any improvements in his vehicle. And this is a very important factor.

Senator NELSON. You mean improvements in his mileage?

Mr. LOOFBOURROW. In the efficiency of his automobile.

Senator NELSON. Well, if he meets the standards set by statute——

Mr. LOOFBOURROW. The assumption that the foreign builder is more technically astute than we are is a fiction. If we can make technical improvements in our cars, and we are planning to do this, the bill should be such that it requires the foreign manufacturer to do the same thing. They should produce their share of the improvements.

Senator NELSON. I would agree with that.

Mr. LOOFBOURROW. None of the bills do that.

[The prepared statements of Messrs. Estes, Secrest, and Loofbourrow with attachments follow. Oral testimony continues on p. 203.]

STATEMENT OF GENERAL MOTORS CORPORATION, PRESENTED BY ELLIOTT M. ESTES, PRESIDENT

Good morning, Mr. Chairman, I am Elliott M. Estes, president, of General Motors Corporation. With me today is Dr. Henry L. Duncombe, Jr., vice president and chief economist of GM. We are pleased to have the opportunity to testify on

H.R. 6860, and particularly on Title II, part I, that promises to have a profoundly adverse effect on the automobile buyers and the national economy.

The American consumer is just now beginning to see more signs of hope of economy recovery, and consumer confidence, as measured by national surveys, is beginning to increase. Yet the public remains cautious in two major respects—home buying and auto purchases. As a consequence of continued consumer reluctance to make "big-ticket" purchase decisions, economic and unemployment recovery is being delayed.

One contributing factor—though certainly not the only one—to the continued reluctance of the American public to purchase homes and new cars is the confusion about energy availability, energy prices and national energy policy, which, in turn, leads to lack of consumer confidence.

For example, there have been conflicting news stories about whether or not people are going to be able to buy gasoline this summer. Also, there has been a wide range of figures quoted for future prices of gasoline. Obviously, people are not going to buy new cars if they are not sure they will be able to drive them. Likewise, their purchase decisions can be influenced by whether gasoline prices are expected to be 70¢ a gallon—or go to $1 a gallon, or drop to some other price.

Both the home building and automobile industries play important roles in national economic recovery and both industries are heavily influenced by consumer uncertainty. An additional reason for comparing them is that H.R. 6860 applies two quite different energy policy philosophies for these two industries. That is, while consumers use about 22% of the national energy in their residential structures, H.R. 6860 provides tax incentives for home insulation and storm windows. It does not impose an arbitrary or punitive limit on the size or fuel consumption of new homes—nor should it. In contrast, while consumers use about 13% of national energy for automotive transportation, H.R. 6860 establishes fuel economy standards that will, by 1981, result in substantial arbitrary restrictions on the types of cars that can be made available to the public.

Unfortunately, neither of these provisions in H.R. 6860 is supported by a thoughtful analysis of the ways in which they will affect the American consumer—nor the way in which they will affect energy consumption!

While we are not opposed to the home insulation tax provisions of H.R. 6860, we do think that this provision—along with the fuel economy standards—is based on an erroneous assumption about the economic wisdom of the American public. That is, these provisions assume that the car buyer does not respond to the fact of higher energy costs and will not adjust to market realities by conserving energy. If the experience of the past two years teaches us nothing else, it is that the consumer does respond.

The turmoil in the energy situation is bringing about drastic changes in the importance that people attach to fuel economy in automobiles—changes to which GM must respond if we are to be successful in business. In order to meet the fuel economy demands of the public, GM has embarked on the most ambitious and costly new-design program in our industry's peace-time history. In all, General Motors plans to spend billions of dollars to provide the highest practicable fuel economy in cars of all sizes in the next few years.

The first stages in this new design program are already in evidence. Since the oil embargo ended some 14 months ago we have introduced six new smaller models, which, taken together, average better than 21 mpg, sales weighted, on the EPA urban/highway test. We also restyled our 1975 compact models, and we are offering new smaller V–6 and V–8 engines.

The 1975 model program is only the first stage in our efforts to meet the fuel economy demands of our customers. In the 1976 model year, we will introduce America's smallest, most fuel efficient car. Still to come are programs to reduce the exterior size of our larger cars while maintaining present levels of roominess and of comfort.

We are developing new, more efficient transmissions. We are working to improve the efficiency, and therefore, the power requirements of air conditioners and other accessories. And for the same reason, we are improving the aerodynamic design of our cars.

One result of our programs to provide consumers with improved fuel efficiency will be a major change in the weight classes of cars we will be offering in 1976 and later model years. Only about 20% of our current products are in inertia weight classes of 3,500 pounds and under; by 1980, we expect these classes to account for more than 70% of our sales.

Looking at our full-size cars, about ⅓ of our total production in 1975 is in inertia weight classes of 5,000 pounds and up. By 1980 we expect cars of this weight class to represent a negligible percentage of our sales. We are taking weight out of virtually every car we build—at least 700 pounds from our full-size cars.

This drastic shift in the weight class of the cars we are building, along with changes in engines, drivetrains and axles, improved aerodynamics and other fuel economy measures will—because of market demands—enable us to keep our commitment to the federal government to meet or exceed 53% improvement in the fuel economy of our cars between 1974 and 1980—from a sales weighted 12.2 miles per gallon in 1974 to a sales weighted 18.7 mpg in 1980.

An important factor in our improvements in fuel economy is that we are planning new entries in the 2,250 and 2,500 pound weight classes that we do not have in 1975. Our goal is to provide cars—of all sizes—that are suited to the new and changed needs and demands of the American people, in terms of passenger and luggage carrying capacity, and other attributes to meet family needs. These cars, however, will be substantially lighter, and therefore more fuel efficient, than our current models.

It should be understood that achieveing the 18.7 mpg goal in 1980 assumes that the public will buy the cars we will be offering and that the 1975 emission standards will be carried over through 1980. A requirement to meet any more stringent emission standards would result in a loss of fuel economy, and the goal of achieving a 53% improvement in fuel economy would be much more difficult, if not out of reach. More stringent standards would make cars more costly to consumers, as well.

The reason for this brief description of GM's product plans is to stress that we are working as hard as we can to improve the fuel economy of our cars, and we plan to continue that effort—and to invest the billions of dollars this entails—because it is the only way in which we can sell enough cars to earn a profit.

As a result of these fuel economy improvements—made in response to consumer demands brought about by higher gasoline prices—total gasoline consumption for all cars on the road will decline between now and 1980. That is, the gasoline consumed by all cars on the road in 1980 will be below the amount used in 1973! The projected savings in oil—as estimated by the Federal Energy Administration—is 587,000 barrels per day by 1980. There is no other energy consuming sector of our economy that is approaching this "*negative energy growth.*" If there were, our country would be well on its way to solving its energy problems.

Why then, do some people feel it is necessary to establish fuel economy standards for automobiles—a product that presently uses only 13% of total energy and is showing *declining* rates of consumption? Because of several misconceptions about the automobile market and automotive technology.

One of these misconceptions is that there is some "magic" new technology that we could use—if only we would—to achieve fuel economy improvements of 50% or more in a given car. I assure you, this is not the case, and such a misconception is not supported by engineering studies. The changes I mentioned earlier, such as lowering performance and improving aerodynamics, can, in some cases, give us improvements in fuel economy. For the most part, however, these technological changes yield results measured in fractions of miles per gallon.

Another aspect of the misconception about technological solutions is that European and Japanese manufacturers rely on superior technology to achieve fuel economy that is generally better than the fuel economy of the American cars. This is simply not true.

The high mpg figures associated with many of the foreign cars result from the simple fact that they are smaller and lighter than most American cars. One needs only to examine the 1975 EPA fuel economy ratings and make a comparison between GM models and comparable imports to see that our technology is as good as any in the world. Note that in Charts A, B and C, which make up the last pages of this statement, in every weight class in which we compete, a domestic GM car ranks either at the top or near the top for fuel economy. These charts—which summarize the EPA fuel economy results on the combined urban/highway cycle for cars with automatic transmissions—illustrate that fuel economy gains come mainly from smaller sizes and lighter weight. This is the reason our product programs are emphasizing weight reduction of our existing compact, intermediate, and full-size cars, and we are planning to bring out new cars that are much smaller.

As we have indicated, meeting the fuel economy objectives of the voluntary program—18.7 miles per gallon by 1980—will require major changes in the kinds of products we offer, and especially in the size and weight of the cars we will put on the market. H.R. 6860 calls for 20.5 mpg—almost 2 mpg more than the voluntary program of 18.7 mpg on a sales-weighted average basis.

Establishing mandatory fuel economy standards, even as high as 20.5 mpg, is likely to have substantial adverse effects on auto sales and employment in the auto industry and throughout the economy, because consumers will not be able to buy the kinds of cars they want. Evolution in car design dictated by consumer demand, not legislative fiat, will, overall, give us the desired results without market disruption.

Our analyses of this legislation has indicated that it could cause a substantial loss of sales and jobs as early as the 1980 model year. Much more drastic consequences could be expected in post-1980 model years as the standards jump an average of 1.5 mpg per year to reach 28 mpg in 1985. Equally important, sales losses of this magnitude would result in retention of older, less fuel efficient cars. Gasoline consumption could increase above the levels that would be achieved without this legislation.

Consumers today are demanding more fuel efficient cars, and we predict that the trend toward lighter, higher mpg cars will continue in the future. That is why we are committing billions of dollars to new model programs to build more fuel efficient cars. I want to assure members of this Committee that we are putting the full efforts of the Corporation behind making our new smaller cars a success in the marketplace.

The idea that GM can build the kinds of cars it wants to build, then use its advertising power to somehow make the American public want to buy those cars is a myth. This point was amply proven by the experience in car sales in the 1974 and 1975 model years. On the contrary, we try to put the kinds of cars on the market that the American people have indicated they want to buy. If we are required to meet standards that force us to build cars that do not conform with what the American people want to buy, they will not be sold and the entire economy will suffer.

If, as we have indicated, the 20.5 mpg standard in 1980 could result in adverse effects on the domestic automobile industry, the standards required for 1981 to 1985 could have consequences that are beyond anything even imagined so far by Congress. 20.5 mpg, which H.R. 6860 mandates for 1980, represents a *68%* improvement over General Motors' 1974 level of fuel economy. 28 mpg mandated for 1985 represents an improvement in fuel economy of *130%* for GM. There is no evidence that such stringent fuel economy standards as called for in this legislation for the 1981–1985 model years can be achieved without serious disruptions of the national economy and intolerable unemployment consequences. Consumer demand for cars has never changed as rapidly in the past as this legislation would require it to change in the future to avoid a negative impact on sales.

The standards called for in the bill, insofar as we can determine, were established on an arbitrary basis without considering energy consequences or the negative impact on the car buying public. No other segment of consumer energy consumption has been singled out for such a drastic action as the automobile, which accounts for only 13% of total energy use but is an important part of the work, family, business and recreational life of America.

The 1985, 28 mpg standard cannot be achieved through technological developments—it can be achieved only by restrictions on the size of cars that can be offered. It is important that Congress have a very clear understanding of what these product restrictions are likely to mean for the car-buying public. Beginning this fall GM will offer a small, light, relatively low powered vehicle that is smaller than the smallest subcompact car now being produced in the United States. We hope that we can certify this car with the Environmental Protection Agency to meet current emission standards and with fuel economy in the area of 28 mpg, at the top of all cars sold in this country.

Note, however, that if we were required to meet a 28 mpg standard for our entire production, the vast majority of our cars would have to be the size of the Vega and our new mini car or *smaller*. This 28 mpg standard would require the production of extremely small two or four-passenger vehicles that do not have adequate interior or trunk space to meet the needs of large numbers of American families. If the American public cannot purchase vehicles that will be suited to

their needs, many owners of full-size cars are likely to keep them rather than trading them in on new, more fuel efficient cars. Thus, rather than conserving fuel, standards in the area of 28 mpg would have the effect of perpetuating the use of less fuel efficient cars, and this would result in increased gasoline consumption, contrary to the purpose of the bill.

Comments on H.R. 6860

Mr. Chairman, I would like to turn now to comments directed specifically to the legislation before this Committee, H.R. 6860. The Senate Commerce Committee also has reported out a bill, S. 1883, that would mandate stringent fuel economy standards. Although the Commerce Committee bill differs in its approach, the effect it would have on the consumer and the economy is similar. Most of our comments, therefore, apply to that bill as well.

Section 212 of H.R. 6860 would establish minimum production weighted fuel economy standards of 18.5 mpg in 1978, 19.5 mpg in 1979 and 20.5 mpg in 1980. The Secretary of Transportation would be required to establish the standards for the years 1981 through 1984 at the "maximum feasible" level and 28 miles per gallon would be required in 1985.

We believe it is a serious mistake for Congress to set standards by legislation, and the problems encountered with the Clean Air Act bear this out. There is widespread agreement that the automotive standard for NO_x in the Act was established in error, is not necessary to achieve air quality goals and blocks the introduction of alternate power plants. Yet Congress has not yet changed that requirement, despite the urging to do so by the Environmental Protection Agency nearly two years ago. Several other government, academic and scientific organizations have made similar recommendations.

Section 212(c)(1) of the bill, as passed by the House, gives the Secretary authority to determine if an "emission standards penalty" exists for any model year compared to the fuel economy that would have resulted if the cars were required only to meet 1975 emission standards. In the event a penalty is determined, the fuel economy standards for that model year would be adjusted by the amount of the penalty.

This Section correctly recognizes that there are likely to be fuel economy penalties associated with meeting future emission standards that are more stringent than current standards. This Section fails to recognize, however, that emissions requirements on auto manufacturers are made more stringent not only by lowering the numerical standards but also by changes in test procedures and other regulations promulgated by the Administrative agency. Changes in test procedure or enforcement regulations, such as the proposed Selective Enforcement Audit procedure, have the same result as a drastic reduction in the numerical standards, insofar as the manufacturer is concerned. These more stringent regulations require the manufacturer to lower his production line emission targets to be sure of meeting all the requirements. Thus, unless Section 212(c) provides for adjustment in the fuel economy standards for changes in emission regulations and procedures that adversely affect fuel economy as well as for changes in the emission standards, it will not be fully effective.

Furthermore, EPA, as the agency responsible for promulgating and enforcing the emission standards and regulations, would be inclined to minimize any estimates of fuel economy penalties associated with the emission standards and regulations. If this legislation is passed there is likely to be conflict between EPA and the auto manufacturers over determining the magnitude of the fuel economy penalty. Since the punitive penalty for a manufacturer of four million cars would be $20 million for each 1/10 mile per gallon below the standards, an accurate determination of the emission standards penalty could be of vital concern.

I have gone into considerable detail in discussing the emission penalty section because it is extremely important that this Committee understand the relationship between legislation mandating fuel economy standards and legislation being considered by other committees of Congress that will establish the emission standards that the automobile companies will be required to meet in future model years. We have urged the Congress not to proceed with fuel economy standards until such time as Congressional decisions on emission standards have been made.

Aside from the merit of any argument against or in favor of fuel economy standards, it seems clear that any proposal to mandate such standards before future emission requirements are established would be premature.

There are a number of other specific provisions in the automotive standards section of H.R. 6860 on which General Motors would like to comment. In the interest of conserving time, however, I will not cover these in my oral testimony today. Attached as Appendix A are GM's detailed comments on Title II, part I.

In conclusion, General Motors currently is working as hard as it can to improve the fuel economy of its cars, and we plan to continue that effort on which we are spending billions of dollars. As a result of the fuel economy improvements that we are making in response to the demand of the car purchasers, total gasoline consumption by all GM cars on the road is going down, and will continue to go down as our new fuel efficient cars make up a larger share of the total car population.

A 53% improvement in the fuel economy of our cars in five model years, which we have committed to achieve under the voluntary program, represents a dramatic and unprecedented contribution to achieving the energy goals of the nation. Automobiles account for only 13% of total energy use, and if similar improvements were made in other energy consuming areas that account for 87% of energy use, the energy "crisis" would soon end.

We recognize, of course, that it is not reasonable to expect as much conservation in other energy consuming sectors as will be achieved in the automotive sector. That is why our nation's energy policy must include measures to increase production of energy as well as steps to conserve energy. The Motor Vehicle Manufacturers Association, including General Motors, urges that the following steps be taken in addition to the voluntary passenger car fuel economy improvement program:

1. Decontrol energy prices to encourage production and reduce consumption.
2. If free market actions are insufficient, impose a tariff on imported oil for the limited time needed to effect greater conservation.
3. Impose a tax on gasoline and other motor fuels if price decontrol and import tariff are not adequate.
4. Legislatively enact a program to monitor the automobile industry's progress toward meeting the 1980 fuel economy improvement goal and require periodic reports to Congress.
5. Continue the present 49-state vehicle emission standards through the 1981 model year to provide the maximum potential for achieving the goal of the passenger car fuel economy improvement program, while avoiding unneeded additional costs to consumers.

We believe these measures represent a sound, well-balanced program that would make a significant contribution to achievement of the nation's energy goals. We urge Congress to direct its attention to these areas rather than to fuel economy standards that could have a drastic negative effect on the well-being of Americans.

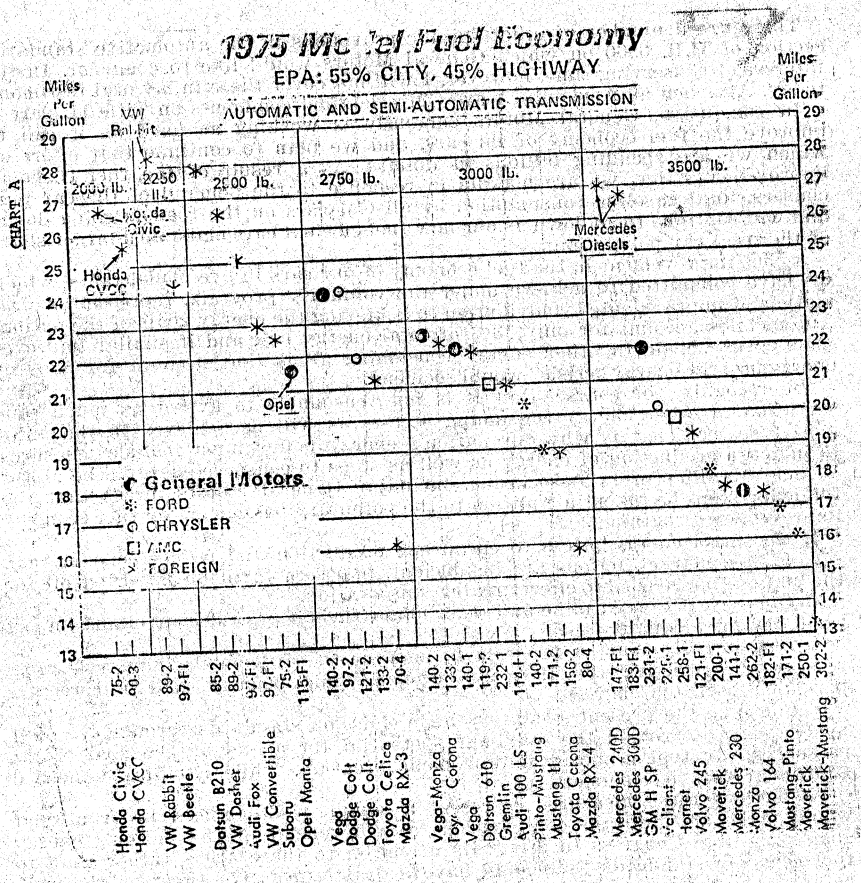

1975 Model Fuel Economy
EPA: 55% CITY, 45% HIGHWAY
AUTOMATIC AND SEMI-AUTOMATIC TRANSMISSION
CHART A
Miles Per Gallon
Miles Per Gallon
2000 lb.
2250
2500 lb.
2750 lb.
3000 lb.
3500 lb.
VW Rabbit
Honda Civic
Honda CVCC
Mercedes Diesels
Opel
General Motors
FORD
CHRYSLER
AMC
FOREIGN
Honda Civic 75-2
Honda CVCC 60-3
VW Rabbit 89-2
VW Beetle 97-FI
Datsun B210 85-2
VW Dasher 89-2
Audi Fox 97-FI
VW Convertible 97-FI
Subaru 75-2
Opel Manta 115-FI
Vega 140-2
Dodge Colt 97-2
Dodge Colt 121-2
Toyota Celica 133-2
Mazda RX-3 70-4
Vega-Monza 140-2
Toy. Corona 133-2
Vega 140-1
Datsun 610 119-?
Gremlin 232-1
Audi 100 LS 114-FI
Pinto-Mustang 140-2
Mustang II 171-2
Toyota Corona 156-2
Mazda RX-4 80-4
Mercedes 240D 147-FI
Mercedes 300D 183-FI
SM H SP 231-2
Valiant 225-1
Hornet 258-1
Volvo 245 121-FI
Maverick 200-1
Mercedes 230 141-1
Monza 262-2
Volvo 164 182-FI
Mustang-Pinto 171-2
Maverick 250-1
Maverick-Mustang 302-2

CHART B

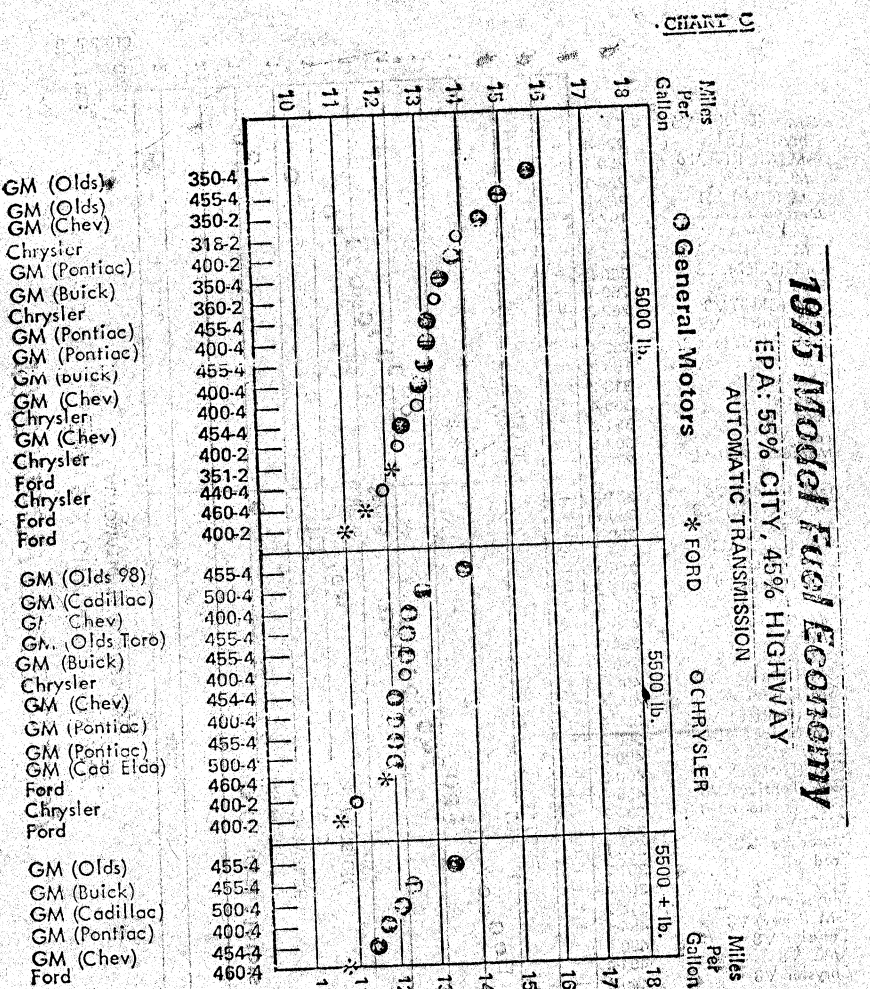
1975 Model Fuel Economy

EPA: 55% CITY, 45% HIGHWAY

AUTOMATIC TRANSMISSION

GM (Buick) V6 231-2
Chrysler L6 225-1
GM (All Divs.)L6 250-1
AMC L6 258-1
GM (Olds) V8 260-2
Mercedes 280 167-4
GM (Chev) V8 [illegible]
GM (Pontiac) V8 400-2
GM (Buick) V8 350-2
Ford L6 250-1
GM (Chev) V8 262-2
GM (Buick) V8 350-4
GM (Pontiac) V8 [illegible]
GM (Pontiac) V8 350-2
Chrysler V8 318-2
Chrysler V8 360-4
Ford V8 351-2
Ford V8 302-2
Mercedes 450 SL 276-FI

GM (Buick) V6 231-2
GM (Seville) V8 350-FI
AMC L6 258-1
GM (Olds) V8 350-4
Chrysler L6 225-1
GM (Olds) V8 260-2
GM (Buick) V6 350-4
GM (Olds) V8 455-4
AMC V8 304-2
GM (Chev) V8 350-2
GM (Pontiac) V8 400-4
GM (Chev) V8 400-4
GM (Pontiac) V8 350-4
GM (Buick) V8 350-2
Chrysler V8 400-2
GM (Pontiac) V8 400-2
GM (Pontiac) V8 455-4
GM (Pontiac) V8 350-2
AMC V8 360-4
Mercedes 450 SE 276-FI
Ford V8 351-2
Chrysler V8 360-4
Chrysler V8 318-2
GM (Chev) V8 454-4
Chrysler V8 400-4
AMC V8 401-4
Chrysler V8 440-4
Ford V8 400-2



ANALYSIS OF AND COMMENTS ON MAJOR SECTIONS OF TITLE II, PART I OF H.R. 6860

APPENDIX TO GENERAL MOTORS STATEMENT—JULY 10, 1975

(These comments are offered to assist the Committee in identifying defects in the bill. As indicated in our statement to the Senate Finance Committee, General Motors believes passage of legislation mandating automobile fuel economy standards is neither necessary nor in the public interest and adoption of these suggestions would not eliminate GM's opposition to H.R. 6860.)

Section 211 provides that in calculating "average fuel economy," the total number of automobiles produced by a manufacturer in a given model year (excluding those exported in the model year) shall be defined by a "sum of terms, each term of which is a fraction created by dividing (i) the number of passenger automobiles of a given model type manufactured in such model year by (ii) the fuel economy measured for such model type rounded to the nearest mile per gallon as determined by the EPA Administrator."

Amendment of Section 211 (a) (5) (ii) to read as follows would provide for greater accuracy in fuel economy calculations: (inserting underlined portion): "(ii) the fuel economy measured for such model type rounded to the nearest 1/10 mile per gallon as determined by the EPA Administrator."

EPA fuel economy measurements are calculated to the nearest 1/10 mpg, and when a number of different measurements are to be added together, the fractional calculation should be used. This procedure will result in a more accurate calculation than the procedure of rounding each number off to the nearest mile per gallon.

Section 211(b) 1 & 2 requires that the fuel economy for "domestically produced" cars be calculated separately from imported cars in determining compliance.

A car is considered to be "domestically produced" if 75% of the cost to manufacture is attributable to value added in the United States or Canada. If manufacture is completed in Canada, however, the car must be imported into the U.S. prior to 30 days after the end of the model year to qualify as "domestically produced."

Cars produced in the U.S. but exported are excluded from the fuel economy calculations.

The separation of domestic and foreign-produced cars would tend to benefit foreign producers, at least temporarily, if the demand for less fuel efficient cars exceeds the quantity the domestic manufacturers will be permitted to produce under the standards. Certainly, they are in a relatively better position to import some larger cars, whereas the domestic manufacturers would not be permitted to use small-size imports to balance the larger, less fuel efficient domestic cars.

Domestic manufacturers would have to make the management decision whether to cut back production of full-size cars toward the end of the model year to adjust the fuel economy average to meet the standard or to pay the fines. Production adjustments could result in a shortage of larger cars at the end of the model year and a quasi black market in this product segment.

SECTION 212—MINIMUM FUEL ECONOMY PERFORMANCE STANDARDS

The proposed bill would set into law specific fuel economy standards for passenger automobiles for model years 1978, 1979, 1980 and 1985 and allow the Secretary to set standards by rule for 1981–1984. Then, under Section 302(b)(3)(B), the 1985 level can be raised or lowered to the maximum feasible average fuel economy by the Secretary if either House of Congress does not object. To avoid the experience of standards set by statute in the Clean Air Act, any fuel economy legislation should leave the specific standards to administrative agency rulemaking.

The passenger automobile standards the Secretary sets for 1981–1984 must be at the maximum feasible level and must provide for steady progress toward the 1985 statutory standard of 28 mpg.

Beginning on January 1, 1978, and continuing each calendar year thereafter, the Secretary shall review the standards and may make amendments to those he has set by rule if at least 18 months lead time is given to the manufacturers.

Section 212(b) relates to establishment of average fuel economy standards for 1981–1984, amendment of 1981–1984 standards and modification of the 1985 passenger automobile standard. Section 212(b)(4) requires the Secretary to consider "technological feasibility, economic practicability, relationship to other federal standards and the purposes of this bill." This language also should be included in Section 212(a)(4) relating to establishment of light duty truck and multipurpose passenger vehicle standards.

It is salutory that the Committee chose to require the Secretary to consider "technological feasibility, economic practicability, relationship to other federal standards and the purposes of this bill" in setting standards. However, this requirement may have little practical effect in providing relief to the industry, for the following reasons:

1. "Technological feasibility" of standards as high as 28 mpg has been demonstrated since there are some cars now being sold in the U.S. which achieve fuel economies in this range.

2. Our experience with the Congress to date indicates it is probable that "economic practicability" cannot be convincingly refuted until the damage has been done to consumers and the economy by reducing sales and increasing unemployment.

3. As stated elsewhere in this paper, EPA is committed to minimizing the fuel economy penalties associated with emission standards. "Relationship to other standards" does not provide any clear language on what is meant and would not provide much relief.

4. "Purposes of this Act" (H.R. 6860) are to conserve oil. There is little relief promised by this provision other than the argument that stringent standards may cause potential new car buyers to retain their full-size cars that are more nearly suited to their needs. This probably cannot be convincingly argued until the sales fail to materialize.

Section 212(b)(3)(B) states that a modification to the 1985 fuel economy level by the Secretary can be disapproved by either House of Congress within 60 days of transmittal to Congress or after 15 days of continuous session of Congress, whichever is the longer period. This is an improvement over the Dingell bill which just had the 60 day period whether Congress was in session or not.

The Secretary is given authority in Section 212(e)(1) to determine if an "emission standard penalty" exists for any model year and to adjust the fuel economy standard for that model year by "subtracting a number of miles per gallon . . . equal to the amount of such penalty." This penalty is the difference between the average fuel economy of all automobiles sold in the model year, assuming the 1975 federal emission standards applied in that year, compared to the average fuel economy the automobiles are likely to achieve under the emission standards that are actually applicable to automobiles in that later model year. A manufacturer may file a petition with DOT for a determination that an "emissions standard penalty" exists and the DOT must decide the issue within 60 days.

This emissions standards penalty provision does not go far enough. It should allow consideration of the effect of regulations like Selective Enforcement Audit, changes in test procedures and high altitude requirements to be considered by DOT, not just the absolute 1975 emission numbers themselves. Moreover, this section mixes apples and oranges since it uses the defined word "automobiles" (covering both cars and trucks up to 10,000 GVW), but references just the light duty (under 6,000 lbs. GVW) emission standards. There should be separate means of computing the emission standard penalty to accord with the grouping of vehicles under the Clean Air Act. To accomplish this, 212(c)(2)(B) should be expanded to include other rules and regulations that affect emissions and 212(c)(4) should be deleted.

Section 212(c)(3) regarding petitions by manufacturers to have the Secretary determine an emissions standard penalty imposes an unrealistic time period for filing such a petition. This type of petition can only be filed ". . . within the 18-month period preceding the beginning of the model year to which it relates." That restricted period was not part of the Dingell bill. This is obviously more of the feet-to-the-fire syndrome that will cause useless waste of resources, time and money within the automobile industry. A more reasonable time period should be specified, or there should be none at all.

The concept of a "emissions standard penalty" is certainly desirable. Inclusion of such a provision in the bill recognizes that there is a relationship between more stringent emission standards and reduced fuel economy. However, it will be very difficult to implement, and as a practical matter, may not provide any relief at all to the auto manufacturers from the fuel economy consequences of more stringent emission standards. There are a number of reasons why this provision would be impracticable to implement:

1. The only way to obtain an accurate measurement of the fuel economy penalty of emission standards in a given year compared to what the fuel economy would be if cars in that model year were required only to meet 1975 standards would be to run two certification fleets, one calibrated to the 1975 standards and the other fleet meeting those applicable to the year in question. Even this very costly and impracticable process would be open to criticism since the baseline cars tested would not be produced, and, therefore, would never be subject to end-of-line tests and field surveillance. Thus, in the mock certification processes they could be set closer to the standards and would obtain better fuel economy than they would if they were actually going to be produced.

2. EPA has consistently argued that there is no inherent relationship between tighter emissions and lower fuel economy. In an attempt to justify their regulations, EPA has consistently minimized any fuel economy penalties. It appears that the emission standard penalty provision will ensure that there will be additional conflict between EPA and the auto manufacturers. Since the punitive penalty for a manufacturer of four million cars would be $20 million per 0.1 mpg below the amount of the standards, "emissions standards penalty" will be of great—if not vital—concern to the automobile manufacturers.

3. The concept of an "average penalty" is inherently inequitable to some manufacturers since the actual penalty will be different for different model cars and all manufacturers have different model mixes.

Section 212(d)(2) provides that compliance with the fuel economy standard is achieved for each year by coming within .50 miles per gallon of the standard. The manufacturer is allowed to carry back or carry forward any amount of fuel economy performance greater than .50 mpg above the applicable standard. The amount carried back or carried forward reduces any civil penalty which the manufacturer may be otherwise subject to for the preceding or subsequent model year. This is a desirable provision which recognizes, to some extent, that manufacturers do not "control" customer demand. It does not go far enough in providing flexibility.

This Section 212 is a classic example of establishing moving targets for the automobile industry. The difficulty of meeting such moving targets is compounded by the fact that the test procedures to establish manufacturer compliance are not definite and are subject to constant revision by the Administrator of EPA. While it is clear that this bill would require a fuel economy test such as conducted by EPA in connection with emissions testing and the driving cycles of 55% urban and 45% highway used for 1975 certification, the EPA can use instead "procedures which yield comparable results." It seems abundantly clear that it is arbitrary and unreasonable to establish minimum fuel economy standards without a corresponding definite test procedure since the outcome of meeting such standards is so dependent upon the test procedure used. Compliance with minimum fuel economy standards is to be determined by EPA.

As noted above, the Secretary of DOT has the authority to establish the standards. It seems obvious that the automobile industry under this proposed legislation would be caught in an administrative agency cross-fire since one agency (DOT) has the authority to create unreasonable standards, while another agency (EPA) is given broad enforcement powers.

The reporting provisions of Section 212(f) are onerous. Under these provisions, the DOT could get almost any information a manufacturer had relating to its product plans. Moreover, most of this information would be proprietary, and if it must be furnished, should clearly be required to be held in confidence by the DOT and EPA. Hence, Section 213(c)(1) should delete the last four lines and, in that event, Section 213(c)(2) is unnecessary.

Section 212(f) also requires manufacturers to submit "plans" describing the steps they intend to take to comply with standards. While this section does not specifically give the government the authority to involve itself in individual company pricing and marketing plans, it is a step in that direction.

This section should be deleted. Auto companies are required to comply or face enormous consequences. Nothing can be gained by requiring needless paperwork.

While this proposed legislation gives any person the right to obtain judicial review of any "rule" promulgated under the Act, the vehicle manufacturer is not afforded any rights to request an administrative hearing to protest or otherwise question such rules. This seems to be in clear violation of the Administrative Procedures Act and other due process requirements. The vehicle manufacturer should be given the right to request a hearing, and the administrative agency should be required to support its rules with appropriate findings based upon substantial evidence. Failure to provide these fundamental rights to a vehicle manufacturer in the Act certainly ignores established legal precedent in administrative law cases. Such omission could cause technical disagreements, which could be resolved at the administrative level, to wind up in court cases.

SECTION 213—DUTIES AND POWERS OF THE SECRETARY AND ADMINISTRATOR

The agencies have the broad powers to hold hearings, subpoena witnesses, require information, reports, documents and materials from manufacturers and to inspect vehicles. There is authority for agencies to obtain a subpoena for any information covered by Section 213(a)(1) that the manufacturer refuses to furnish as well as to obtain a court order to facilitate authorized inspections. Nowhere is there any indication that the vehicle manufacturer has any right to request a hearing if he believes that he is being prejudiced by unreasonable administrative agency action.

In addition, giving both EPA and DOT authority to exercise these broad powers could easily result in administrative chaos that could bog down the

regulatory functions of these administrative agencies. Also, see the last portion of the comments regarding Section 212 for deficiencies of the confidentiality portion of Section 213.

SECTION 214—LABELING AND ADVERTISING

This section requires a fuel economy label to be placed on each new automobile beginning 90 days after the Act is passed. This requirement could be effective long before the 1978 model year fuel economy standards.

The information required on the label is: (a) the fuel economy for that car "which a prospective purchaser (could) expect; (b) representative average annual fuel costs associated with the operation of such automobile; (c) the range of fuel economy performance of automobiles of similar size and weight; (d) a statement that the fuel economy is less than applicable standard, if that is the case; and (e) a statement that fuel economy of other automobiles is available from the dealer. The form and context of the label, within the above constraints, are set by EPA after consultation with the Federal Trade Commission.

There are many serious problems with the labeling provision. Following are some specific problems associated with such requirements:

1. Neither the manufacturer nor anyone else can indicate the fuel economy "which a prospective purchaser can expect." The ways in which cars are operated vary so drastically as to make it virtually impossible for a manufacturer to present a single number representing "what a prospective purchaser can expect." Manufacturers can and do label their vehicles with fuel economy numbers obtained on specified driving cycles. Ideally, these indicated fuel economies are expressed in two numbers representing the extremes within which most drivers can expect their experience to fall. The EPA dynamometer tests representing urban and highway cycles, while not ideal, do serve this purpose.

2. The language, as written, appears to require specific fuel economy data for each car. The development of such information would be an impossible burden.

3. The language does not recognize the lead time problems at the beginning of the model year. It would be impossible to provide the labels at the beginning of the model year.

4. Average annual fuel cost information would be virtually meaningless. In addition to the variations in mpg that different drivers will experience, new cars will be driven varying numbers of miles by different drivers, and fuel costs vary in different geographical areas and seasons. The EPA omitted fuel cost information from its voluntary labeling program because the information was not useful to consumers.

5. Any fuel economy labeling requirement should provide that the information shown does not constitute a warranty. The bill as written does not have that important provision.

6. The requirement that the label contain information about the "range of fuel economy performance of automobiles of similar size and weight" is not realistic. The range in most cases would be so wide as to be virtually meaningless.

7. It is not realistic to require the manufacturer to state that fuel economy information on other makes of cars is available from the dealer. Since the dealer is not under the manufacturer's control, the manufacturer cannot require the dealer to make such information available.

This entire section should be simplified to give EPA authority to require fuel economy labeling by rule after consultation with the Federal Trade Commission and the Secretary. The Committee Report should instruct the EPA that the Committee intends that the mandatory program be fashioned on the current voluntary labeling program.

Section 214(b) requires that the fuel economy labeling information of Section 214(a) is to be included in the price sticker required by the 1958 Act. This is a direct conflict with the last sentence of 214(a) which says the EPA and FTC determine the form and content of the fuel economy sticker. The fuel economy sticker must be separate and distinct from the price sticker because considerable room is necessary to present the relevant explanations, qualifications and warranty disclaimers that are fundamental to a fuel economy label requirement. Moreover, the information that goes on the price label is financially oriented and may be developed at different times from other sources and on different data processing equipment than the technically oriented fuel information. The

fuel economy information often is not available until start of production, thus allowing no lead time to set up and print the required labels.

Like Section 212, this section also lacks a public hearing opportunity for manufacturers and adequate due process procedures. There has been no effort to comply with the minimum hearing requirements of the Administrative Procedures Act.

SECTION 215—PROHIBITIVE CONDUCT

This entire section is so vague that it is quite likely unenforceable. Substantial penalties of up to $10,000 per violation, with each day a separate and continuing violation, could be assessed for failure to comply with "any provision of this part (other than Section 212(a)) or any standard, rule, regulation, or any order issued." In order to make such violations enforceable, it seems evident the language must be more specific. Other prohibitive acts in this section are also unreasonably broad.

SECTION 216—CIVIL PENALTY

The civil penalties set forth in this provision for violation of fuel economy standards are so enormous that they may well be considered punitive. The penalty for the automobiles of a manufacturer falling below the applicable average fuel economy standard during a model year would be $50 times all the automobiles the manufacturer built that model year times each mile per gallon by which the average fuel economy standard is missed.

This section does not recognize added Section 212(d) which provides that compliance is achieved if the standard is missed by up to .50 mpg, nor does it recognize the carry back and carry forward features of 212(d) discussed above. Fractional miles per gallon deviations (in units of one-tenth per mile) are likewise punishable at $5 per car per one-tenth a mile. In the event a manufacturer produced two million vehicles and exceeded the average minimum fuel economy standard by one mile per gallon, he would be penalized up to $100 million, assuming no carry over is available. This is clearly punitive for violating a law, particularly since the manufacturer does not have complete control over the factors that determine whether or not the manufacturer can comply. If a penalty is imposed, it should be only on those cars that exceed the standard. Section 216 could result in penalties being imposed even on some of the most fuel efficient cars.

As indicated above, the marketplace will determine the types and sizes and fuel economies of vehicles produced during the model year. The rights of the vehicle manufacturer to fundamental due process would be abused if the penalties were imposed after the fact as proposed in this bill. Incredibly, the Secretary does not have discretion to compromise or modify the civil penalties unless necessary to prevent insolvency or bankruptcy of a manufacturer, or unless the "manufacturer shows that noncompliance resulted from an act of God, a strike, or a fire." This would enable the government to nearly confiscate industry member assets.

At the very least, this section should be broadened to give the Secretary additional discretion in compromising civil penalties. There may be many reasons why a manufacturer may fail to achieve an average fuel economy objective through no fault of his own. For example, a curtailment of natural gas at the Wilmington GMAD plant for an extended period (a very real possibility) could seriously reduce production of T cars needed to achieve a high production-weighted average. GM would not only be penalized by lost sales, but would be confronted with having to choose between shutting down additional plants to adjust the production-weighted average or paying enormous penalties.

While a manufacturer may appeal a civil penalty in a particular U.S. Court of Appeals, a full adjudicatory hearing on the record under the Administrative Procedures Act is vital due to the massive civil penalties. The presentations of data, views and arguments allowed the manfacturer in opposition to the penalty by Sections 216(a)(1) and 216(b)(2) falls far short of the due process hearing with full rights to cross-examination, of government personnel and to obtain documents from the government that are necessary to test whether the penalty is properly assessed. On review by a court, a full administrative hearing record is vital. Its absence is a clear violation of basic due process. By contrast, under the Safety Act, a presentation of views, etc., by the manufacturer to the Administrator is followed by a right to trial *de novo* on the issue of defect determination

and that trial, at which a full adversary record is developed, may then be reviewed by the appellate court.

SECTION 217—RELATIONSHIP TO STATE LAW

States are not preempted from establishing their own fuel economy standards, labeling requirements or fuel economy advertising laws. However, any such state law or regulation must be identical to a federal standard. Since this bill does not contain any operative provision regarding advertising, the states would be left free to regulate fuel economy advertising. It would be better to prohibit all regulation of fuel economy advertising by states and political subdivisions thereof. Note that states can have their own differing laws on any of these subjects until the subject is covered by a standard issued under this federal law that has become effective. This provision should be amended to provide for preemption on all areas covered by the Act whether standards have been issued or are effective. Even for a short period, the automobile industry cannot live with differing state standards requirements. Any individual state fuel economy standards, etc., would necessarily result in an unreasonable burden on commerce. The automobile industry is a mass production industry which simply cannot accommodate different state standards, notwithstanding the State of California's separate emission standards. Finally, identical state standards and rules serve no purpose other than to support duplicate bureaucracy and increase the costs of business to the detriment of everyone.

STATEMENT BY F. G. SECREST, EXECUTIVE VICE PRESIDENT—OPERATIONS STAFFS, FORD MOTOR COMPANY

Mr. Chairman and members of the Senate Finance Committee. I am Fred G. Secrest, Executive Vice President—Operations Staffs, Ford Motor Company.

The bill before this committee, H.R. 6860, requires that motor vehicle manufacturers meet fuel economy standards beginning in model year 1978 at levels 32% higher than 1974 models. It provides severe fines for manufacturers whose average vehicle production does not meet these standards. It establishes even tighter standards for future years, culminating in a 28-mpg average by 1985.

It is Ford Motor Company's conviction that fuel economy improvement is one area where there is no need for regulation. With gasoline at 57¢ a gallon in June, increases last week of 3¢–5¢ a gallon and potentially much higher prices through decontrol and import fees, consumers don't need a law to force them to look for the best fuel economy in a vehicle that meets their transportation needs. Consumers have already responded by buying a larger proportion of small cars—compacts and subcompacts are currently running 57% of Ford's sales, compared with 41% in 1973. Fuel economy now tops the list of buyer concerns.

Nor does the manufacturer need a law to force him to provide what consumers are demanding. A few weeks ago, Ford introduced eight new "MPG" cars giving the customer a choice of several models that deliver 27 mpg in the EPA combined metro/highway test, or 34 mpg on the highway test alone. During the past five years, we have spent nearly $2 billion to develop new small cars and to expand our small-car capacity. By 1980, we expect to spend an additional $2 billion on more efficient car designs and better fuel economy, through engine and drive-train improvements and product downsizing. We expect Ford's 1976-model average fuel economy to be three miles per gallon, or more than 20%, better than in 1975. These changes are expensive, but we are making them because it is imperative that we respond to the demands of the marketplace.

The cost of mandating and deadlining these changes by Government regulations is likely to be very high, for several reasons.

First, conversion of facilities and re-design and engineering programs to meet the timetables indicated in this bill would be enormously expensive and disruptive. In the six months ending March 31, 1975, Ford had before-tax *losses* of over $200 million. As a result, we have had to increase our borrowing substantially. While we anticipate a recovery from the present automotive depression, the losses will have a significant effect on our long-run investment capability. Present plans for fuel economy improvement—the $2 billion I mentioned—represent the maximum we can afford—and some other manufacturers may well prove unable to do this much. Indeed, Congress may eventually need to look at whether

the fuel-economy improvements demanded by the market can be financed in full without some form of Government guarantee or incentive.

Even with no limit on the capital available for investment, there would be a serious risk that a manufacturer might fail to achieve some of the standards under the rigid timetable prescribed in H.R. 6860. The risks include: (1) variability of test results (fuel economy tests are far from exact, and in this bill millions of dollars will be riding on .1 mpg); (2) the mix of cars, which can vary widely in response to consumers' demand thus changing the average fuel economy of the manufacturer; (3) the ability of the manufacturers to put together, on the stated date, all of the individual technical improvements that may be required to achieve the overall target. Failure, even briefly or to a minor extent, to meet the targets for any of these reasons would mean massive financial penalties. Although the bill describes these as fines or penalties falling on the *manufacturer*, in practice the manufacturer would have to recover some or all of them in the prices of his products. In addition, the consumer would pay the extra costs inherent in rush programs aimed at meeting arbitrary deadlines.

Perhaps most importantly, the standards may discourage actions aimed at the real objective of the legislation—i.e., continuing improvements in fuel efficiency for the entire car fleet. Running changes—those made *during* a model year—might not count at all for the purpose of measuring the average results. The introduction of *high-risk advanced technology* would be slowed because the penalty for failure would be so much greater than in a free market—under a mandated standard, manufacturers would have to place their limited financial and technical resources almost entirely on "sure" things. Finally, the long-term standard of 28 mpg in H.R. 6860 could substantially rule out efforts to *improve* the fuel economy of *larger* cars, forcing those owners who believe they have a genuine *need* for family sedans or station wagons to retain, as long as possible, their less-efficient older models—because manufacturers couldn't afford to develop improved versions.

Consequently, we believe that mandatory fuel economy legislation is unnecessary, that it could prove costly to consumers and that it would impose an unnecessary and unreasonable burden on the domestic automobile industry.

If Congress nevertheless believes that mandating fuel economy by legislation is essential, we would hope that any bill would have three important objectives: (1) to accomplish the goal with the least possible interference in the marketplace and with minimum disruption to employment; (2) to set standards that are found, after thorough study, to be technologically and financially achievable; and (3) to assure the availability of vehicles adequate to meet the transportation needs of the people. Further, the automotive fuel conservation goals should be reasonably commensurate with whatever conservation actions may be mandated for other energy uses. Accordingly, if such legislation is deemed necessary, we strongly urge the following modifications to H.R. 6860.

1. Delete the 28 mpg standard in 1985

It seems probable that a 28 mpg average cannot be achieved by 1985 across the range of vehicles presently demanded and needed by a large segment of the U.S. market. Only 10 of the 320 passenger cars listed in the 1975 EPA Buyer's Guide for 49-state vehicles achieve a metro/highway average of 28 mpg or better. All ten of these are imports and all except the Peugeot diesel are in the 2500 pound weight class or lighter. A manufacturer could hardly make long-term investments in improved engines or substantial weight reductions for full-sized vehicles because of the risk that, even with improvements of 50% or more, the vehicle would not come close to the 1985 standard. The six-passenger family sedan and the station wagon would probably disappear from the new-car market. (These cars now make up about half of the vehicle population.)

Such a standard would require a total restructuring of the industry, including the writeoff of billions of dollars worth of facilities. Major unemployment would be unavoidable during the long transition period. Further, domestic vehicle prices would have to reflect the enormous cost of this facility conversion; while most foreign manufacturers, who are already building 2500-pound cars for their home markets, would have considerably less task and cost. We believe, therefore, that a standard at this level would turn over a further large piece of the market to the imports—with severe effects on U.S. jobs and the balance of payments.

The flexibility given to the Secretary of Transportation to modify the 28 mpg goal does not resolve this problem. Product and facility plans would have to be

based on the statutory standard until a determination of modification was made in 1979 or later. Any modifications would probably come only at the last minute, after hundreds of millions of dollars had been spent, and after opportunities to improve larger-car efficiencies by 50% or more had been passed up.

There is no doubt that continued improvement in automotive fuel economy is necessary and possible after 1980. We believe that this improvement will occur as a result of market forces, and that by 1980 it will become obvious that a costly regulating structure is not needed to achieve the goal. If Congress wishes to assume a continuing need for regulation, however, it should authorize the administering agency to set post-1980 fuel economy standards only after (1) careful assessment of technological and financial feasibility; (2) a thorough analysis of consumer needs; (3) analysis of the impact on safety; and (4) reassessment of the nation's energy requirements and supplies. Without such assessments, there is no more basis for mandating a 28 mpg fleet average today for a period ten years away than there is today for mandating improvements of 100% in the efficiency of aircraft, home furnaces, power plants or crop dryers.

2. Modify the Penalties

The level of financial penalties set forth in H.R. 6860 is exorbitant and could be considered confiscatory. If Ford should achieve an average fuel economy of 19 mpg in 1980, the shortfall of 1.5 mpg or only 8% from the statutory standard would result in a civil penalty of about $225 million, equivalent to before-tax profits of $450 million. (As a reference, the Company's annual dividends at the present rate total $224 million.) Fines of this magnitude, of course, would deprive manufacturers of needed funds to make heavy investments in conversions and fuel economy technology—thwarting their ability to make the necessary changes. In fact, such huge contingent liabilities would, in our judgment, seriously jeopardize the Company's ability to raise the capital funds needed to attain major fuel economy improvements. Payment of the penalties could of course jeopardize dividends and interest payments on outstanding debt. In view of our concern about the effect of these provisions on how investors and lenders would evaluate the industry's securities, we suggest that the Committee seek testimony from Government and private experts on this point.

There are a number of ways in which the penalties could be moderated, such as (1) use production-weighted average but apply the penalty only to vehicles not meeting the standard; (2) reduce the dollar amount of the penalty; (3) provide that the maximum penalty not exceed some stated percentage (perhaps 10–25%) of a manufacturer's profits; and (4) make the penalty tax-deductible. Such changes could still result in potential penalties that would assure maximum effort to avoid them, without the shattering consequences of shortfall under the H.R. 6860 schedule. We strongly urge that the Committee consider such modifications.

3. Delete any requirement for truck fuel economy standards

Because the lowest possible operating cost is a prime objective for truck operators, fuel economy is already an especially important purchasing criterion for trucks. Further, as trucks are designed primarily to haul goods, a reduction in truck size which might be required to meet fuel economy standards would not necessarily result in an overall reduction in fuel consumption, if more trips would be needed to carry the same amount of goods.

Further, as yet there is no accepted method for measuring truck fuel economy. There are no EPA data indicating the average fuel economy of the nation's new truck fleet, because trucks rated more than 6000 gvw have only engine (not vehicle) dynomometer testing. Such testing cannot be extrapolated into meaningful fuel economy figures. The wide variety of truck usage patterns, loading conditions and vehicle configuration have dictated this engine-only testing.

Additionally, trucks presently have unique emission standards, and the entire approach would have to be adjusted to this fact.

4. Permit inclusion of cars presently imported by the manufacturer in overall fuel economy average

As initially proposed by Representative Sharp, each manufacturer would have determined an "import base" equal to his imports in 1973 or 1974 as a percentage of the total vehicles sold by him in those years. This "import base" would be included in determining the manufacturer's average fuel economy in future years. The House, however, accepted a substitute provision requiring that *all* imports (except from Canada) be excluded in determining a manufacturer's basic fleet-average fuel economy.

The provision as originally proposed would clearly prohibit a manufacturer from initiating so-called "runaway-plant" actions in order to achieve the fuel economy standard. For measurement against the standard, he would be allowed to count no more than his percentage of imports in 1973 or 1974. This seems to be a reasonable safeguard. To exclude from the standards base the cars presently imported by a manufacturer is an undue burden. Present fuel economy averages include imports of the domestic manufacturers, and to rule them out would make Ford's task up to .3 mpg greater than originally assumed.

We are gratified that the House, in H.R. 6860, has recognized that there must be adjustments for the fact that, for any given vehicle and power-train, emission control technology that may be available in the foreseeable future will almost certainly exact fuel economy penalties if the standards are tightened beyond 1975 levels.

Finally, we want to emphasize that the single most helpful thing that Congress could do to improve automotive fuel economy, and also to help the automotive industry recover from the current recession, would be to defer any further tightening of emission standards and retain the present already-stringent standards for five additional years. The President has recently recommended such a deferral, based on an analysis by the Energy Resources Council that indicates substantial fuel economy degradation in moving to the 1978 statutory levels. I must stress that an absolute prerequisite for the degree of fuel economy improvement envisaged by this bill between now and 1980 is a freeze in emission standards at or near today's levels.

We request permission to submit for the record a number of specific suggestions for changes in H.R. 6860 that would, in our judgment (1) remedy the serious problems I have discussed today and (2) clarify and improve the bill with respect to a number of technical details.

FORD MOTOR COMPANY SUGGESTED AMENDMENTS TO H.R. 6860

Sec. 211(a)(1)

No change.

Sec. 211(a)

(2) The definition of "automobile" has been modified to include only passenger vehicles under 6,000 lbs. gvw. This change excludes all trucks, busses and some multipurpose vehicles from the requirements of the Act.

(3)–(4) The definitions of "passenger automobile" and "light duty truck and multipurpose passenger vehicle" are no longer required and have been deleted.

(5) The definition of "average fuel economy" has been renumbered (3), deletions reflecting the exclusion of trucks and mpvs have been made where appropriate, and a provision for greater accuracy in fuel economy calculations has been added.

RATIONALE

Rationale for deleting truck fuel economy standards

Because lowest possible operating cost is prime objective for truck operators, fuel economy is already an important purchasing criterion for trucks.

Since trucks are designed primarily to haul goods, a reduction in truck size which might be required to meet fuel economy standards would not necessarily result in overall reduction in fuel consumption, if more trips would be needed to carry same amount of goods.

As yet there is no accepted method for measuring truck fuel economy. There are no EPA data indicating average fuel economy of nation's new truck fleet because trucks rated more than 6,000 gvw are subject to only engine (not vehicle) dynamometer testing, which cannot be extrapolated into meaningful fuel economy figures.

Trucks presently have unique emission standards, and the entire approach would have to be adjusted to this fact.

Rationale for change in fuel economy calculations: EPA fuel economy measurements are presently calculated to the nearest 1/10th mpg and when a number of different measurements are to be added together, the fractional calculation results in a more accurate calculation which could be extremely important when penalties are computed for each 1/10th mpg.

(6)–(12) These subsections have been redesignated to reflect earlier deletions.

(13) Renumbered to reflect earlier deletions.

Sec. 211(b)

(1) Modified to reflect exclusion of trucks and mpvs.

(2) (new subsection) This is a new subsection incorporating the original provisions of the Sharp amendment. It would allow manufacturers to include a proportion of imported passenger cars equivalent to the presently imported passenger cars, for purposes of determining overall fuel economy average.

RATIONALE

This provision would limit the inclusion of imported vehicles in the manufacturer's fuel economy average to the percentage of vehicles currently imported. Certainly this amendment is sufficient assurance that a manufacturer will not be able to import a larger percentage of vehicles in any given year to meet a fuel economy standard.

EPA fuel economy averages presently include imports; to exclude them would make Ford's task up to .3 mpg tougher.

(2) Renumbered to reflect the addition of new subsection (2).

Sec. 212(a)

(1) This subsection has been amended as follows:

(a) A specific reference to the emission standards penalty provision of § 212(c) has been added to avoid any question regarding its applicability to all years and all fuel economy standards established under the Act.

(b) Modified to reflect the exclusion of trucks and mpvs.

(c) All specific standards after the 1980 model year are to be established by the Secretary under § 212(b) of the Act.

RATIONALE

Rationale for administratively setting post-1980 standards

A 28 mpg standard in 1985 cannot be achieved by 1985 across the range of vehicles presently demanded and needed by a large segment of the U.S. public. If the American public cannot purchase vehicles suited to their needs, many owners of full-sized vehicles are likely to keep them rather than trading them in on new more fuel efficient cars (and cleaner ones). This would have an adverse effect on auto sales, create enormous economic disruption and be contrary to the purpose of the bill. Such a standard would require total restructuring of the industry and major unemployment would be unavoidable during the long transition period. Domestic vehicles prices would have to reflect the enormous cost of conversion while foreign manufacturers, who are already building 2500 pound cars for their home markets could have little or no task or cost—this could turn over a further large piece of market to imports with severe effects on U.S. jobs and balance of payments.

The nation would be better served by Congress authorizing DOT to administratively set post-1980 standards only after (1) careful assessment of technological and financial feasibility; (2) a thorough analysis of consumer needs; (3) analysis of impact on safety; and (4) reassessment of the nation's energy requirements and supplies.

(2) No change.

(3) Line 21—Modified to reflect elimination of the specific 1985 requirement.

(4) Deleted to reflect exclusion of trucks from the requirements of this Act.

Sec. 212(b)

(1) Amended to reflect the expanded authority of the Secretary to establish post-1980 standards and to more directly instruct the Secretary to establish standards based upon a real, demonstrable national need.

(2) No change.

(3) (A) Amended to direct the Secretary to consider national energy needs in amending any standards established pursuant to the Act.

RATIONALE

Rationale for adding consideration of national energy needs to standards criterion

The automotive fuel economy goals must be considered and established in a manner consistent with the nation's energy conservation program. Ford believes the goals set forth in H.R. 6860 seem to have been established without considering the total context of the energy problem. Certainly, no other segment of consumer consumption has been singled out for such drastic action. Consistency

with other energy use policies and goals must be part of the criterion for establishing long-range standards.

(3) (B) The authority of the Secretary to modify the 1985 standard would not be required in light of earlier changes and has, therefore, been deleted.

(3) (C) Deleted for the reasons noted in connection with the deletion of § 212 (b) (3) (B) on page 28.

(4) Amended to reflect earlier changes and to specifically direct the Secretary to consider national energy conservation needs when establishing fuel economy performance standards.

Sec. 212(c)

(1) No change in view of the recognition that in the short term, tighter emission standards will probably exact fuel economy penalties.

(2) (A) and (B)

(a) Amended in view of the exclusion of trucks and mpvs.

(b) Modified to reflect the fact that changes in certification and other test procedures beyond those applicable to 1975 vehicles such as requirements for high altitude testing and testing of vehicles on assembly lines may also create an emission standards penalty.

(2) (c) No change.

RATIONALE

Rationale for expanding emissions standards penalty to include test procedures

Ford has estimated, for example, that even if emission standards remain at the 1975 levels, application of EPA's proposed Selective Enforcement Auditing Procedure (SEA) [39 Fed Reg 45360 et. seq.], would significantly tighten the emission control requirements and create fuel economy penalties up to 8%. (See Section III, page 4 of Ford's Response to EPA's Proposed SEA procedures April 17, 1975.)

(3) No change.

(4) Amended to reflect the addition of test procedures in § 212(c)(2) (A) and (B).

Sec. 212(d)

(1) Amended to reflect the exclusion of trucks and mpvs. Specific reference should be made to section 206(a) of the Clean Air Act which contains the authority for prototype certification testing conducted by EPA.

(2) No change.

RATIONALE

Section 206 refers to other EPA emission testing but in order to be feasible and practicable, the development of fuel economy figures for labeling and other purposes must be associated with emission testing prior to the time that vehicles are produced and offered for sale to the public.

Sec. 212(e)

(1) Amended to include administrative determinations in judicial review process.

RATIONALE

Modified to make it clear that important administrative determinations such as those involved in establishing an emission standards penalty are appealable along with other rulemaking actions to the appropriate United States Court of Appeals. Such determinations would, of course, be appealable to a United States District Court, under the general provisions of the Administrative Procedures Act. However, there appears to be no reason to create such a diversity of review procedures. In the interest of judicial efficiency it would seem desirable to have appeals from all questions under the Act treated in the same fashion.

(2) No change.

(3) No change.

(4) No change.

Sec. 212(f)

(1) and (2) The monitoring provisions appear to be superfluous in light of the penalties for failure to meet standards stated in objective, performance terms, and, therefore, Section 212(f) has been deleted.

RATIONALE

Rationale for deleting monitoring

We believe this section is a carryover from a previous draft of the bill which set up a fuel economy monitoring procedure with no penalties.

Since the bill provides after-the-fact assessment of average fuel economy over a model year subject to substantial penalties in the event of noncompliance, monitoring during a model year would be unnecessary.

The bill would require a lengthy process of reporting with possible attendent disclosure of confidential future plans.

Sec. 213(a)

(1) No change.
(2) No change.
(3) No change.

Sec. 213(b)

(1) No change.
(2) No change.

Sec. 213(c)

(1) No change.
(2) No change.

Sec. 214(a)

(1) Amended to reflect the fact that EPA fuel economy numbers will not necessarily reflect what can be expected from each individual vehicle but rather the performance of test vehicles selected to represent a range of vehicles including the one that carries a particular label.

Amended to limit the information on the label to a presentation of the fuel economy performance attributable to the vehicle carrying the label.

(2) No change.

Sec. 214(b)

No change

RATIONALE

Rationale for change in labelling provision

An overly-detailed and complex label will be confusing to the consumer and therefore less effective.

Average annual fuel costs are almost meaningless given the variability in miles driven, price of gasoline and driver habits (city or highway driving, etc.).

Sec. 215

(1) No change.
(2) Amended to delete the double jeopardy aspect of penalties under this Act and the Automobile Information Disclosure Act for labelling failures.
(3) No change.
(4) No change.
(5) Deleted. See comments under (2) above.

Sec. 216(a)

(1) No change.

RATIONALE

Rationale for deleting double jeopardy aspects of labelling penalties

Currently, H.R. 6860 amends the Automobile Information Disclosure Act to require fuel economy labelling information on the retail price sticker and to subject fuel economy labelling failures by manufacturers and dealers to penalties under the Disclosure Act. In addition, however, present sections 215 and 216 of H.R. 6860 would also subject such failures to civil penalties of up to $10,000 per occurrence. Thus, a manufacturer or dealer could be subject to being fined twice for the same action. This is unfair and Ford believes that H.R. 6860 should, therefore, be modified to delete the double jeopardy aspect of penalties under this Act and the Automobile Information Disclosure Act for labelling failures.

(2) No change.

Sec. 216(b)

(1) (A) Amended as follows:

(a) The civil penalty has been modified to provide for a penalty equal to $5.00 for each ⅕ mpg shortfall. Other means of minimizing the import of the massive potential penalties applicable to average fuel economy shortfalls, might include:

(i) A new section 216(b)(1)(C) providing for tax deductability of the fines; or

(ii) A new section 216(b)(1)(C) placing a "cap" on the total fine that could be levied against a single manufacturer.

(b) A reference to the "deemed to meet" provisions of § 212(d)(2) has been added to clarify that the fine is to be applied only to the extent of the shortfall from the adjusted level.

RATIONALE

Rationale for limiting penalty

The penalties in the bill are exorbitant. A manufacturer of four million cars would pay $200 million for missing the standard by only one mpg—a shortfall that could easily occur by an unforeseen change in consumer preference or a less than adequate adjustment for tightened emission levels.

Penalties of this magnitude, if incurred, would deprive manufacturers of needed funds to make heavy investment in plant conversions and fuel economy technology—thwarting their ability to make the necessary changes. Further, just the contingent liability of that magnitude of penalty would jeopardize a company's ability to raise capital funds needed for conversions and technology.

(1) (B) No change.

(2) No change.

(3) Amended to authorize the Secretary to take action with respect to a civil penalty that would otherwise be due where the manufacturer can show that his failure to meet the requirements resulted in unanticipated consumer demand which existed despite his efforts to influence the marketplace.

RATIONALE

S. 1883, as approved by the Senate Commerce Committee contains a provision similar to this amendment proposed by Ford. Under H.R. 6860, a sudden mix shift in the middle of the model year or in the event consumers simply do not purchase the percentage of small cars planned for production, a manufacturer would be faced with either producing vehicles he could not sell or the potential of massive penalties.

Sec. 216(b)(3)(C)

See preceding comments.

Sec. 217

Amended to provide preempt all state fuel economy standards and enforcement procedures.

RATIONALE

Rationale for preemption change

Energy is a national problem and there is no need for identical state standards. On the contrary, adoption of identical standards by a state would create costs and administrative burdens associated with attempting to calculate fuel economy averages by state. If purchases within a state constituted a different sales mix than the national mix, a manufacturer could conceivably face fines, even though the national average met the standard.

STATEMENT BY ALAN G. LOOFBOURROW, VICE PRESIDENT—ENGINEERING CHRYSLER CORPORATION

I am Alan Loofbourrow, Vice President of Engineering for Chrysler Corporation. I appreciate the opportunity to elaborate on my remarks before the Finance Committee regarding proposed automotive fuel economy legislation.

As you may know, we testified before the Senate Commerce Committee last December on the bill to mandate a 50 percent improvement in fuel economy by 1980. At that time, I discussed Chrysler's long standing commitment to better fuel economy, described the engineering considerations involved in improving gasoline mileage, and outlined drawbacks to legislative solutions to the problem. I would

like to submit for the record a copy of that statement. I think it will be helpful as you consider whether fuel economy standards are necessary and in the best interest of the country.

Since December, there has been one significant development affecting automotive fuel economy that I would like to discuss. Just last March, the Administrator of the Environmental Protection Agency granted us an extension to present standards for hydrocarbons and carbon monoxide, and urged Congress to continue these standards through 1979. Since that time the President has recommended freezing hydrocarbon, carbon monoxide, and oxides of nitrogen standards at today's levels—1.5 grams-per-mile hydrocarbon, 15 grams-per-mile carbon monoxide, and 3.1 grams-per-mile oxides of nitrogen. If Congress will act on this recommendation, freeze the hydrocarbon and carbon monoxide standards at their present levels, and also hold fast to the present oxides of nitrogen standard of 3.1 grams-per-mile, we can significantly improve gasoline mileage over the next few years while continuing our progress toward cleaner air.

Failure to carry over all these standards—especially the oxides of nitrogen standard—will seriously handicap our efforts to improve fuel economy. No law, no tax or incentive program, and no crash research and development project can change that basic engineering fact of life.

Let me explain that briefly. The air is composed primarily of two basic gaseous elements: oxygen and nitrogen, which at about 3000° F., combine to make nitrogen oxides. Because an engine is more efficient and gets better gasoline mileage when it is run at higher combustion temperatures, we seek out ways to raise that temperature. However, to control oxides of nitrogen, we lower temperatures—and that means lower gasoline mileage. Like it or not, we can't repeal the laws of thermodynamics. That is why the oxides of nitrogen standard of 3.1 grams per mile is so essential to improved fuel economy.

At Chrysler we are developing ways to meet today's stringent standard while improving fuel economy by precise electronic control of the engine's operation. As a result of our engineering achievements, we have told the Administration that with a 3.1 NOx standard, we believe we can reach the goal of a 40 percent improvement in fuel economy on a sales-weighted basis by 1980. In making that commitment we assumed that we could successfully develop sophisticated electronic controls for spark timing, fuel distribution, and other engine operations.

As you know, Chrysler pioneered the first major application of electronic technology when it made the electronic ignition system standard on all engines in the 1973 model year. We believe the next major development will come in the 1976 model year. We hope to introduce on several models an electronic spark timing control which will make possible a new non-catalyst emission control system.

The electronic control adjusts spark timing very precisely for a number of variables including engine temperature, throttle position, and engine speed. The precision of this control permits us to modify our engines to burn a mixture of 18 to 20 pounds of air to one of fuel, rather than the present ratio of 16 to 1.

At ratios of about 18:1 and above the nitrogen oxides drop off significantly. While there is some fuel economy loss when an engine is run on a mixture this lean, it is not as great as the loss from other methods used to control oxides of nitrogen. If the development of this electronic spark timing control and several other engine modifications are successful, we believe we can meet present emission standards without most of the emission control devices on cars today, including the catalytic coverter and the air pump. By using this system we are confident we can get better fuel economy and driveability than on today's 1975 automobiles.

Because the engine runs on a lean mixture of fuel to air we have been referring to this approach as a lean burn system. Since the lean burn system would eliminate the catalytic converter, we could use leaded gas with its higher octane ratings, design our engines for higher compression ratios, and regain some additional economy.

It is especially essential that Congress act to carry over the oxides of nitrogen standard. The recommendation by the administrator of the Environmental Protection Agency to allow the oxides of nitrogen standard to drop to 2.0 grams per mile in 1977 seriously jeopardizes our commitment to improved fuel economy.

As you know, the administrator's decision implicitly requires us to develop non-catalyst emission control technology as quickly as possible. If the standards remain at 1.5 grams per mile hydrocarbons, 15 grams per mile carbon monoxide,

and 3.1 grams per mile oxides of nitrogen, we believe we can remove catalysts from most—if not all—of our engines by the 1977 model year. And we can improve fuel economy by introducing lower axle ratios, lock-up torque converters, and smaller engines in more models.

However, these fuel-saving changes reduce the car's performance. If the oxides of nitrogen standard is 2.0 grams per mile in 1977, we may not be able to make these changes at all because lowering the NOx standard will result in a significant loss in driveability that could jeopardize the driver's safety. Even if we can implement these changes, they would be less effective than we originally planned because of the stringent NOx requirement.

Any reduction of oxides of nitrogen emissions results in a fuel economy penalty—regardless of the control system. We estimate that with our present control systems, the administrator's recommendation of 1.5 grams hydrocarbons, 15 grams carbon monoxide, and 2.0 grams oxides of nitrogen would produce a fuel economy penalty of about seven percent from today's levels. Given time, we might be able to reduce that penalty—but we can never overcome it entirely through engineering changes alone. Accordingly, we urge Congress to hold to the 3.1 grams level for NOx through 1979 at least so that we can achieve our fuel economy objectives by the end of this decade.

That standard is stringent enough to protect public health. Studies by the National Academy of Sciences and others show that even at that level, the rapid trend to clean air will continue.

The industry is already working without benefit of any legislation to improve fuel economy. As a result of technical improvements and the shift in mix to small cars, we estimate that 1975 Chrysler models average 15 percent better fuel economy than 1974 models.

Not only are fuel economy standards unnecessary, they may be unworkable as well. They ignore all the other considerations that an engineer has to take into account when designing a vehicle—including safety, emissions, performance, and cost to the consumer. The fact is the engineer will be completely hamstrung if absolutely contradictory standards are written into law. Yet this could easily happen if Congress sets a fuel economy standard and at the same time allows the statutory standards for oxides of nitrogen emissions to come into effect.

This industry does not need any artificial incentive to improve fuel economy. We already have the strongest incentive a free economy produces—the demand of our customers.

We've answered the demand for energy-efficient cars over the years. Even when gasoline was selling at half of today's prices, Chrysler based successful advertising and marketing campaigns on the fact that its cars delivered more miles per gallon than the competition's. Today, with gasoline mileage more important than ever, the demand is greater than ever. And we've responded to that demand. We are improving the efficiency of our vehicles. We have increased our production capacity of small cars and smaller engines.

If we could get 20 to 30 percent better fuel economy than our competitors, we would do so—and we would proclaim it as loudly and aggressively as we could. That's the way our free enterprise system works—and there's no need to tamper with it.

I think we all know from experience in both government and industry that you can't legislate a technical breakthrough or solve a problem by simply throwing money at it. Technological progress usually requires careful and painstaking work. There are rarely dramatic solutions to our problems. To help reach the President's 40 percent goal, we are taking a number of actions in addition to developing electronic controls to fine tune our engines. These modifications include reducing vehicle weight, improving aerodynamics, lowering axle ratios, improving transmissions, reducing brake drag, lowering idle speeds, and reducing rolling resistance. None of these sound very exciting by themselves. But taken together, they can produce significant improvements in gasoline mileage. We are also planning new lines of smaller, lighter, more fuel-efficient cars over the next few years. The first of these new cars will be available late this year, and will sell alongside our present line of compacts.

The National Science Foundation has said nothing could provide a greater incentive to better fuel economy than a freeze on today's emissions standards A stable outlook for emissions standards, an organized approach to determining

new standards, and a realistic timetable for implementing those standards would provide the greatest possible incentive for development of more fuel-efficient motor vehicles.

I hope that this committee will resist the temptation to find some easy legislative solution to our energy problem. There is none. Rather, I urge you to take the lead in doing the one thing will move us dramatically closer to our fuel economy and energy conservation goals: freeze emissions standards for hydrocarbons, carbon monoxide, and oxides of nitrogen at today's stringent levels. This will assure better gasoline mileage—and clean air as well.

STATEMENT BY ALAN G. LOOFBOURROW, VICE PRESIDENT—ENGINEERING, CHRYSLER CORPORATION, BEFORE THE SENATE COMMERCE COMMITTEE, WASHINGTON, D.C., DECEMBER 10, 1974

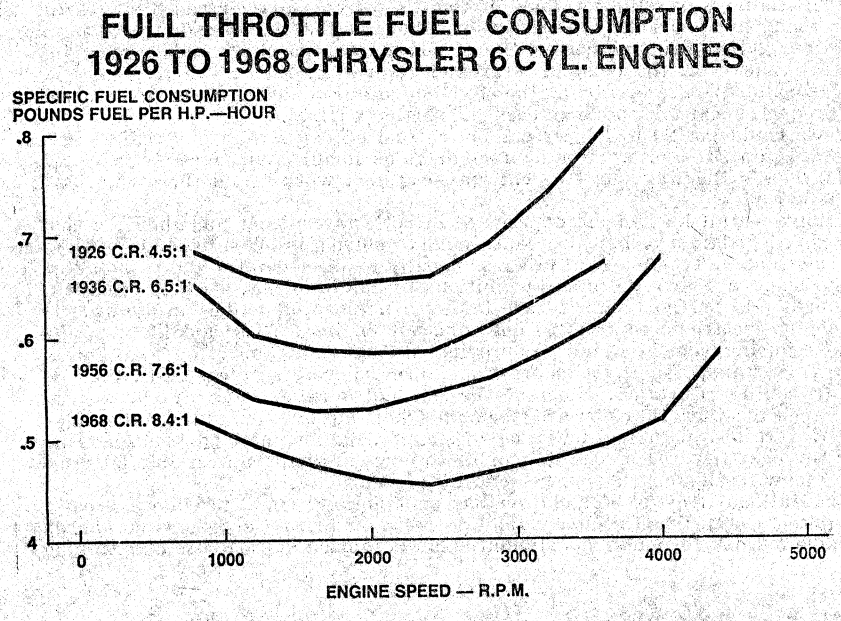
I am Alan Loofbourrow, Vice President of Engineering for Chrysler Corporation. With me today are Harold L. Welch, Chief Engineer—Engineering Program Planning, and Victor C. Tomlinson, Senior Attorney—Legal Staff. I appreciate this opportunity to give you my views on the Energy Conservation Act of 1974 which would mandate a 50 percent improvement in fuel economy by 1980.

In light of the country's energy problems, I can understand why the government would ask automotive engineers: what can you do to improve the fuel economy of your vehicles? Chrysler engineers have been answering that question for years. We have always believed that fuel economy is a marketable item—and so we provided superior fuel economy long before it became a matter of government concern.

Even when gasoline was selling at half of today's prices, Chrysler based successful advertising and promotion campaigns on the fact that our cars delivered more miles per gallon than the competition's. And they do. As a result of our continuing efforts, we have consistently led the Mobil and Pure Oil fuel economy trials, not only with our small cars, but with our mid-size and full-size cars as well. Today, with gasoline mileage more important than ever, EPA tests show that 1975 Chrysler-built models offer better average fuel economy than those of either of our major competitors.

I'd like to describe how we have improved engine efficiency over the years, so that you can appreciate our technical problems in making improvements in fuel economy.

(Graph: Fuel Consumption 1926–1968)



This graph will give you some idea of our progress in improving the internal combustion engine. It shows the amount of fuel a six-cylinder engine with its throttle wide open requires at different engine speeds to produce one horsepower for one hour. The lower the curve, the less fuel the engine needs. If you compare the 224 cubic inch engine of 1926 at the top of the chart, with the 225 cubic inch engine of 1968 at the bottom, you can see that our engineers have improved engine efficiency by about 40 percent in 40 years. In addition the maximum power of the engine more than doubled.

I want to emphasize that this 40 percent was all technical improvement within the engine—it does not take into account the trend to smaller cars or improvements to the vehicle itself.

Improvements to the vehicle include reducing its size and weight, improving its aerodynamics, reducing its rolling resistance, and modifying its drive train.

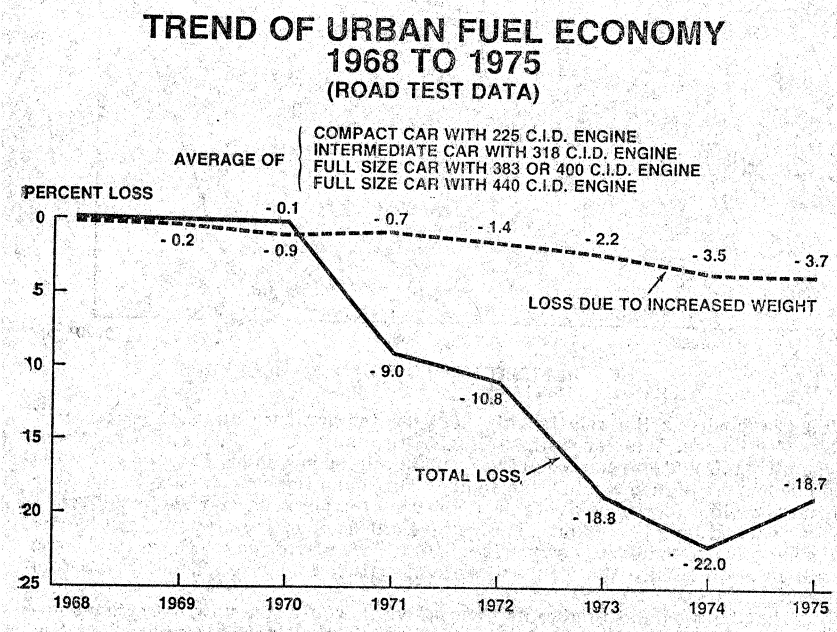
For example, because of the increase in engine power our engineers were able to reduce axle ratios over the years from 4.61:1 in the 1920s to 2.76:1 in the 1960s. So fewer revolutions of the engine are required to drive the car each mile down the road.

To help use fuel more efficiently, we improved our carburetors and redesigned the combustion chamber. We developed the vacuum spark advance to vary ignition timing according to throttle position and other factors. We helped the engine breathe in air more efficiently by modifying the intake manifold, cylinder head, valve timing and size, and exhaust system. We went from an L-head valve arrangement to overhead valves.

And while we were redesigning the engine for better efficiency, the petroleum industry was raising octane ratings for regular gasoline from about 55 in the 1920s to as much as 95 in the 1960s. Because of this improvement in the fuel, and our better control of the combustion process, we were able to increase the compression ratio of our 6-cylinder engine from 4.5:1 in 1926 to 8.4:1 in 1968. That gained for us both better economy and better performance.

As a result of changes of this kind in all of our engines the 1968 engines were generally the most efficient automobile engines the industry ever offered. These engines were about as efficient as a comparable size diesel engine under some test conditions, and more efficient than the Wankel or any other alternate engine we might be able to consider for production. This is history and it is factual.

(Graph: Urban Fuel Economy 1968–1975)



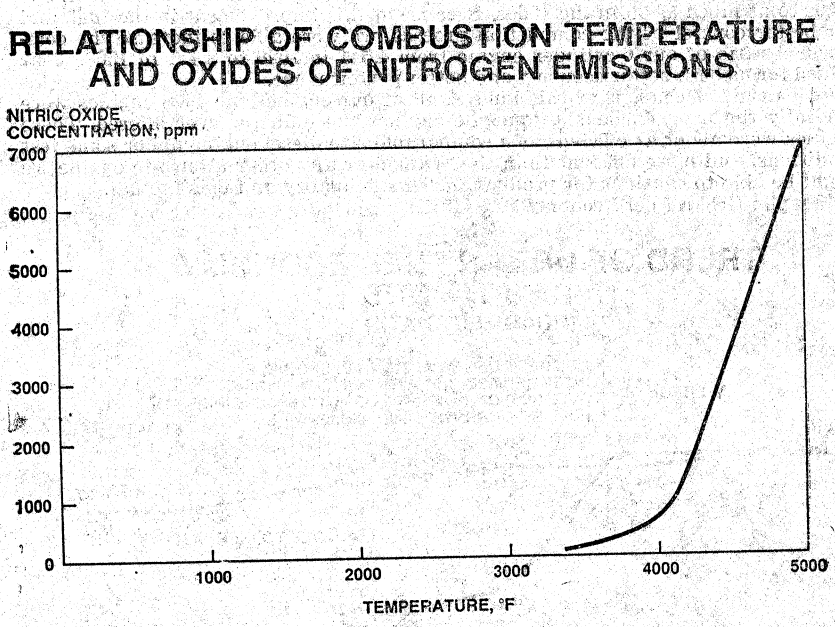
Unfortunately, the trend to better fuel economy was reversed in 1968. As this chart shows, the average fuel economy for Chrysler Corporation vehicles in city driving dropped by nearly 19 percent between 1968 and 1975.

Part of that loss—about 4 percent—results from weight added to our cars. Much of the weight is required by federal safety and emissions mandates. For example, between 1968 and 1975 we had to add 275 pounds to a full size standard four-door sedan as a result of federal requirements. All our other product improvements added less than 200 pounds to the vehicle weight. There were comparable weight increases for compact and mid-size cars.

The emissions control systems effectively mandated by the Clean Air Act caused a 15 percent penalty because the engine modifications available that fulfill its requirements also reduce gasoline mileage.

Engineering involves a series of compromises. Whenever we design a vehicle we have to consider a number of factors: emissions, fuel economy, performance, driveability, cost, availability of materials, weight, safety, durability, manufacturing feasibility, and so on. What we do in one area often involves trade-offs in another. In the past, the engineer could balance his goals to get good performance, good economy, good driveability, and so on. But now, he has lost control over these trade-offs. He must go all-out for emissions, and he must add weight to comply with safety and damageability regulations. He cannot get the kind of performance and economy out of the engine he used to get and that the public expected. He may be completely hamstrung if two absolutely contradictory standards for emissions and fuel economy are written into law. Let me give you one example.

(Graph: Relationship of combustion temperature and NOx emissions)



This graph shows the relationship between temperature and the creation of oxides of nitrogen. Whenever air is heated to about 3000° F, its two principal gasses, nitrogen and oxygen, combine to make nitrogen oxides. Yet, the engine is more efficient at higher combustion temperatures. To improve fuel economy over the years, we had increased average combustion temperature so that in 1968 combustion reached levels of about 4200 degrees. Consequently emissions of nitrogen oxides had also gone up. It is self evident that if we are to reduce these emissions, we will have to reduce the combustion temperature and lose efficiency and fuel economy.

With that background to give us perspective, I would like now to review some of our objections to the Fuel Economy standards in the Energy Conservation Act.