95th Congress
1st Session

COMMITTEE PRINT

The Fuel Efficiency Incentive Tax Proposal: Its Impact Upon the Future of the U.S. Passenger Automobile Industry

UNITED STATES INTERNATIONAL TRADE COMMISSION

Report to the Committee on Finance of the United States Senate on Investigation No. 332–86 Under Section 332 of the Tariff Act of 1930

COMMITTEE ON FINANCE
UNITED STATES SENATE

RUSSELL B. LONG, *Chairman*

JULY 1977

Printed for the use of the Committee on Finance

U.S. GOVERNMENT PRINTING OFFICE
93-188 O WASHINGTON : 1977

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402

COMMITTEE ON FINANCE

RUSSELL B. LONG, Louisiana, *Chairman*

HERMAN E. TALMADGE, Georgia
ABRAHAM RIBICOFF, Connecticut
HARRY F. BYRD, Jr., Virginia
GAYLORD NELSON, Wisconsin
MIKE GRAVEL, Alaska
LLOYD BENTSEN, Texas
WILLIAM D. HATHAWAY, Maine
FLOYD K. HASKELL, Colorado
SPARK M. MATSUNAGA, Hawaii
DANIEL PATRICK MOYNIHAN, New York

CARL T. CURTIS, Nebraska
CLIFFORD P. HANSEN, Wyoming
ROBERT DOLE, Kansas
BOB PACKWOOD, Oregon
WILLIAM V. ROTH, Jr., Delaware
PAUL LAXALT, Nevada
JOHN C. DANFORTH, Missouri

MICHAEL STERN, *Staff Director*
GEORGE W. PRITTS, Jr., *Minority Counsel*

LETTER OF TRANSMITTAL

CHAIRMAN

UNITED STATES INTERNATIONAL TRADE COMMISSION

WASHINGTON, D.C. 20436

The Honorable Russell B. Long
Chairman
Committee on Finance
United States Senate
Washington, D.C. 20510

July 15, 1977

Dear Mr. Chairman:

This is in reference to your letter of May 20, 1977, requesting the United States International Trade Commission to conduct a study on the impact of the Fuel Efficiency Incentive Tax Proposal, sections 1201-1204 of the proposed National Energy Act, on the future of the U.S. passenger automobile industry and its competitiveness in the United States with foreign passenger automobile industries.

Attached please find the Commission's report analyzing the impact of this proposal, which includes the Fuel Inefficiency Tax and Fuel Efficiency Rebate, on consumption and sales of U.S. and foreign automobiles, employment in the U.S. automobile industry, and U.S. consumers of passenger automobiles. The Commission's analysis, which is for the period 1978 through 1985, is based upon three different assumptions: (1) the U.S. market under existing laws and regulations; (2) the U.S. market with the implementation of both the Fuel Inefficiency Tax and the Fuel Efficiency Rebate; and (3) the U.S. market with the implementation of the Fuel Inefficiency Tax only.

Please continue to call upon us whenever we can be of assistance to you.

I hope you have a nice day.

Yours sincerely,

Daniel Minchew
Chairman

Attachment

UNITED STATES INTERNATIONAL TRADE COMMISSION

THE FUEL EFFICIENCY INCENTIVE TAX PROPOSAL: ITS IMPACT UPON THE FUTURE OF THE U.S. PASSENGER AUTOMOBILE INDUSTRY

Report to the Committee on Finance of the
United States Senate on Investigation No. 332-86
Under Section 332 of the Tariff Act of 1930

July 1977

UNITED STATES INTERNATIONAL TRADE COMMISSION

COMMISSIONERS

Daniel Minchew, Chairman
Joseph O. Parker, Vice Chairman
George M. Moore
Catherine Bedell
Italo H. Ablondi

Kenneth R. Mason, Secretary to the Commission

This report was principally prepared by

the Office of Industries

George Whitney, Machinery and Equipment Division
George Deyman, Office of Economic Research
Warren Dean, Office of the General Counsel

assisted by

James McElroy, Machinery and Equipment Division
Harry Bainbridge, Office of the General Counsel

CONTENTS

CONTENTS

PREFACE

In response to a request dated May 20, 1977, by the Senate Committee on Finance, the United States International Trade Commission reports herein the results of investigation No. 332-86, instituted on May 31, 1977, under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)) 1/, on the impact of the Fuel Efficiency Incentive Tax proposal, as transmitted by the President to the Congress, upon the future of the U.S. passenger automobile industry and its competitiveness in the United States with foreign passenger automobile industries.

The full text of the request is as follows:

> The Senate Committee on Finance requests that the U.S. International Trade Commission undertake a study of the Fuel Efficiency Incentive Tax proposal, Subpart 1 of Part B of Title II of the proposed National Energy Act, as transmitted to the Congress by the President of the United States. This request is made pursuant to section 332(g) of the Tariff Act of 1930, and, under the present calendar for consideration of the President's proposed legislation, the study should be submitted to the Committee on Finance no later than July 15, 1977.
>
> The Committee is interested in an analysis of the impact of the Fuel Efficiency Incentive Tax proposal, which includes the Fuel Inefficiency Tax and the Fuel Efficiency Rebate, on the future of the U.S. passenger automobile industry and its competitiveness in the United States with foreign passenger automobile industries. We are particularly interested in the Commission's view of the impact of this proposal on consumption and sales of U.S. and foreign automobiles, employment in the U.S. automobile industry, and U.S. consumers of passenger automobiles.

The Commission, in its efforts to fully comply with the request of the Committee on Finance, explored and used various avenues of data gathering and analysis.

1/ See Notice of Investigation published on June 22, 1977, 42 F.R. 31661.

A public hearing was held in connection with the investigation on July 6, 1977, in Washington, D.C. The information contained in this report was obtained from the public hearing, from briefs and other submissions filed by interested parties, from responses to the Commission's questionnaires, from information published in Automotive News and Ward's, from published and unpublished studies by U.S. Government agencies and other sources, from material supplied by the Motor Vehicle Manufacturers Association (United States and Canada), and from the Commission's files.

The Commission has examined several well-known and respected econometric automobile demand forecasting models. The Wharton Econometric Forecasting Associates Automobile Demand Model (hereafter referred to as the Wharton EFA Automobile Demand Model) was used as an analytical tool in making projections of automobile sales, product mix, employment in the U.S. industry, and retail prices. Except as noted, none of the observations or projections presented in this report should be attributed to any interested party.

SUMMARY AND OBSERVATIONS

The Commission has projected the impact of the Fuel Efficiency Incentive Tax proposal (secs. 1201-1204 of the proposed National Energy Act), which includes the Fuel Inefficiency Tax (FIT) and the Fuel Efficiency Rebate (FER), on the future of the U.S. passenger automobile industry and its competitiveness in the U.S. market with foreign passenger automobile industries. These projections were made within the framework of three hypotheses: (1) the Base Case under existing laws and regulations; (2) the Fuel Inefficiency Tax and the Fuel Efficiency Rebate proposal (FIT/FER); and (3) the FIT proposal (without the FER). The projections assume equal treatment for imported and United States/Canadian automobiles under the proposals.

The tax and rebate system embodied in the President's National Energy Act proposal is essentially a pricing mechanism aimed at the U.S. consumer of new passenger automobiles and has as its overt purpose the promotion of the demand for more fuel-efficient automobiles and the discouragement of the demand for less fuel-efficient ones.

Under the Base Case hypothesis, sales of United States/Canadian new passenger automobiles per year are generally projected to increase during the period 1978-85, while sales of imported new passenger automobiles are projected to decline. Under the FIT/FER proposal and under the FIT proposal, it is projected that manufacturers located in the United States would make fewer sales of new passenger automobiles per year than under the Base Case projections. The U.S. consumer would

switch, at least initially, some purchases to imported new passenger automobiles. Further, it is projected that the bulk of the increase in sales of imported new passenger automobiles would be of passenger automobiles manufactured in Japan, both under the FIT/FER and FIT proposals.

The lost sales of United States/Canadian automobiles registered in the United States projected under all proposals except the Base Case are expected to be primarily the result of declining demand for full-sized new passenger automobiles, in which the U.S. industry predominates. Further, U.S. sales of imported and United States/Canadian passenger automobiles combined are expected to decline under the FIT/FER or the FIT proposal as compared with the Base Case.

Thus, under the Base Case, annual sales of new passenger automobiles in the United States would be expected to reach 14 million units by 1985, i.e., sales of 12.5 million United States/Canadian new passenger automobiles and 1.5 million imports. Under the FIT/FER proposal, a loss in total annual sales of new passenger automobiles of 30,000 units is projected for 1985; under the FIT proposal, a similar loss of 40,000 units is projected. Under the FIT/FER proposal, sales of United States/Canadian new passenger automobiles in 1985 are projected to drop below the Base Case level of 12.5 million units by 330,000 units; under the FIT proposal, such sales would drop by 140,000 units. Sales of imported new passenger automobiles in 1985 are projected to increase above the Base Case level of 1.5 million units by 300,000 units under the FIT/FER proposal and by 100,000 units under the FIT proposal.

Employment in the United States engaged in the production of new passenger automobiles is projected to increase under the Base Case during 1978-85, but under the FIT/FER proposal and the FIT proposal employment will be below the Base Case. Under the Base Case, employment is projected to increase from 826,000 employees in 1978 to 1.1 million employees in 1985. In contrast, 23,000 employees would be displaced under the FIT/FER proposal during 1985 while 9,000 employees would be displaced under the FIT proposal during the same year.

Prices of United States/Canadian mid-size, full-size, and luxury new passenger automobiles within each class are projected to increase above Base Case levels by the same amounts under either the FIT/FER proposal or the FIT proposal during the 1978-85 period. Prices of domestically produced subcompact and compact new passenger automobiles will be below Base Case levels under the FIT/FER proposal, but will be identical to Base Case levels under the FIT proposal.

Prices of imported subcompact and compact new passenger automobiles will be below Base Case levels during the 1978-85 period under the FIT/FER proposal, but will be identical to Base Case price levels under the FIT proposal. Prices of imported luxury new passenger automobiles will generally increase above Base Case levels by identical amounts under either the FIT/FER or FIT proposal during the period. Since there are presently no passenger automobiles imported into the United States (except from Canada) in either the mid-size or full-size class which are not also luxury automobiles, no projections were made with respect to these classes.

Of major significance in assessing the impact of the FIT/FER proposal is to what extent the proposal, if enacted, would cause a reduction in the amount of gasoline consumed by passenger automobiles. Automobile manufacturers are required under present law to meet average annual fuel economy standards for the model years 1978-85, reaching 27.5 mpg for their production of passenger automobiles in the model year 1985. On the basis of the projections in this report, the U.S. industry as a whole may not meet this standard by model year 1985. While passenger automobiles exceeding the 1985 standard are presently being manufactured, the ability of each manufacturer to meet the required fuel economy standards for its entire product line will depend to a significant extent on the nature of the emmission standards manufacturers will be required to meet during these years and, to a lesser extent, new safety features which may be required. Further, the development of new technology will play an important role in this respect. Substantial penalties are provided by present law for a manufacturer which does not meet the average fuel economy standard for a model year. Thus, the economic consequences of such a failure would be prohibitive unless it becomes more profitable to sell inefficient automobiles and incur the penalty than to comply with present law.

It is projected that the FIT/FER proposal would not contribute meaningfully to the domestic industry's ability to meet the fuel economy standards required by present law. The proposal substitutes public price regulation for private action and may duplicate action,

such as promotional rebates, already available to individual manufacturers. To the extent tax rebates would be payable on sales of imported automobiles, the proposal would tend to impair the natural competitive advantage the U.S. manufacturers could otherwise have in the small-car market by using revenue from their own sales of larger, less efficient cars to hold down or even discount their prices of smaller, more efficient models. In so doing, the proposal could impair the ability of individual U.S. manufacturers to meet the average fuel economy standards under present law. To the extent the proposal would have an adverse impact on the volume of new automobile sales, it could tend to discourage conversion from older, less efficient, and more polluting full-size automobiles.

The Fuel Efficiency Incentive Tax proposal provides that rebates would be payable with respect to sales of imported automobiles manufactured in foreign countries other than Canada only to the extent provided in executive agreements entered into with such foreign country. This would be done in an attempt to control the amount and nature of competition between U.S. and foreign producers in the U.S. market so that U.S. producers would not be disadvantaged by the proposal. While the terms of any such agreements are not known, they would necessarily raise potential conflicts with the international obligations of the United States.

INTRODUCTION

The National Energy Act, as proposed by the President of the United States and transmitted to the Congress, is intended to establish an overall national energy policy. The subject of this study is the Fuel Efficiency Incentive Tax proposal, which is incorporated as subpart I of part B of title II (secs. 1201-1204) of the proposed act, and its impact upon (1) the future of the U.S. passenger automobile industry and (2) the competitiveness of such industry with foreign passenger automobile industries in the U.S. market. The projections made in this report are for the period 1977-85.

The Fuel Efficiency Incentive Tax proposal provides for a system of manufacturers' excise taxes and rebates designed to increase the retail prices of fuel-inefficient automobiles and decrease the prices of fuel-efficient automobiles sold in the U.S. market. This system of taxes and rebates would constitute an addition to a number of laws regulating the U.S. automobile industry in the public interest.

Assumptions

Mandatory average fuel economy standards are required of U.S. manufacturers and importers of automobiles, beginning with the 1978 model year and increasing thereafter. 1/ The projections in this report were made on the assumption that in the administrative establishment of these standards for the model years 1981-84

1/ The Motor Vehicle Information and Cost Savings Act, as amended by the Energy Policy and Conservation Act (15 USC 2002 et seq.).

the standards would have been set at the levels at which no tax or rebate would be payable under the Fuel Efficiency Incentive Tax proposal.

Automobile exhaust emission standards are prescribed under present law. 1/ While the standards will become more stringent for future model years, the uncertainty of administrative implementation, coupled with the pendency of legislation which would amend the future standards, makes the future impact of this law particularly difficult to assess. Thus, the projections in this report were made on the assumption that the standards in effect for the model year 1977 will continue in effect. To the extent that these standards become more stringent for future model years, they will necessarily tend to have a negative impact on fuel economy.

Similarly, automobile safety standards are prescribed under present law 2/. The projections in this report were made on the assumption that no new safety standards which would cause additional weight to be added to new passenger automobiles would be implemented through 1985. Any increase in curb weight caused by increased safety standards would necessarily tend to have an adverse effect on fuel economy.

The Fuel Efficiency Incentive Tax proposal provides that rebates would be payable with respect to imports of automobiles manufactured in foreign countries other than Canada only to the extent provided in executive agreements entered into with such countries. 3/ The

1/ Clean Air Act of 1963, as amended (42 USC 1857 et seq.).
2/ Motor Vehicles Safety Act of 1966, as amended (15 USC 1391).
3/ Sec. 1202 of the proposal.

nature and content of any such agreements, which would raise complex international trade issues, are not known. Thus, the projections in this report were made on the assumption that such rebates would be payable on sales of such foreign automobiles on an identical basis with those of United States/Canadian automobiles.

The projections in this report are based primarily upon the Wharton EFA Automobile Demand Model, the basic economic assumptions of which were modified in the following respects:

	Average annual growth rates (percent)		
	1977-80	1980-85	1977-85
GNP (real)	3.5	3.3	3.4
Disposable personal income (real)	3.8	3.4	3.6
Inflation	5.0	4.0	4.5
Price of gasoline	10.0	10.0	10.0
Unemployment	Falling toward 4.5 percent by 1985		

The projections in this report were made primarily with respect to passenger automobiles in use in the United States, U.S. registrations of United States/Canadian and imported new passenger automobiles, U.S. employment in the automobile industry, retail prices of automobiles, and the impact of retail prices on U.S. consumers. Projections for the period 1977-85 with respect to registrations, retail prices, and import shares are by size classes, i.e., subcompact, compact, mid-size, full-size, and luxury class (irrespective of size). However, the definition of these classes for the period 1977-85 is uncertain, and is made subject to the reservations described later in this report.

The projections in this report are made within the framework of three different hypotheses: (1) The Base Case; (2) the Fuel Efficiency Incentive Tax proposal, which includes the Fuel Inefficiency Tax (FIT) and the Fuel Efficiency Rebate (FER); and (3) the FIT proposal (without the FER). The conclusions and observations in this report were based upon a comparison of the projections made under these three different hypotheses.

Nature of Statistical Data Used To Determine the Impact of the President's Proposed National Energy Act

Unless otherwise noted, all annual data are presented on a calendar-year rather than a model-year basis. Calendar-year data are used primarily because comparable foreign registrations (sales) and data relating to domestic registrations (sales) are only published on a calendar-year basis. Likewise, the automobile demand models used by the Commission use calendar-year data for historical purposes and forecasts. Model years for domestic automobiles and lightweight trucks, when used, cover the period August 1 of the preceding year to July 31 of the year indicated.

U.S. registrations of new passenger automobiles refer to the total number of new passenger automobiles registered, domestic and imported, for use during each calendar year. Domestic registration, unless noted otherwise, refers to U.S. registrations of new passenger automobiles manufactured in the United States and Canada. Foreign registrations, or U.S. registrations of imported new passenger automobiles, do not

include vehicles made in Canada. For purposes of this report, the terms "registrations" and "sales" may be used interchangeably for the 1977-85 period. Automobile sales data used throughout this report for earlier periods refer to actual sales from dealers to the ultimate automobile consumer.

Definitions of the Terms and Concepts Used in this Report

1. The following terms are as defined in the Motor Vehicle Information and Cost Savings Act, as amended by the Energy Policy and Conservation Act (15 USC 2001):

a. Passenger automobile
b. Automobile
c. Fuel economy
d. Average fuel economy standard
e. Manufacturer
f. Model type
g. Model year

See appendix B of this report for the text of this act, and pages 34-39 for an explanation of its provisions.

2. President's Fuel Inefficiency Tax (FIT) is as provided in section 1201 of the proposed National Energy Act, as transmitted to the Congress by the President.

3. President's Fuel Efficiency Rebate (FER) is as provided in the Congress by the President.

4. Prices of new passenger automobiles consist of the summation of the following charges: (1) average base list prices for automobiles with no "extras", (2) the value of an installed options package (3) state and local taxes, and (4) transportation charges. Prices include the FIT and the FER where appropriate.

5. For the 1972-77 period, the classes subcompact, compact, mid-size, full-size, and luxury are defined as follows:

A. Subcompact: All passenger automobiles with a wheelbase of not over 100 inches (excluding luxury cars).

B. Compact: All passenger automobiles with a wheelbase over 100 inches and not over 111 inches (excluding luxury cars).

C. Mid-size: All passenger automobiles with a wheelbase over 111 inches and not over 118 inches (excluding luxury cars).

D. Full-size: All passenger automobiles with a wheelbase over 118 inches (excluding luxury cars).

E. Luxury: Since the basis for this category is the manufacturer's suggested retail price, the actual cutoff is somewhat arbitrary. However, the lowest priced model types in this class are generally (for domestic automobiles) the Buick Electra 225, the Oldsmobile 98, and the Chrysler New Yorker. Imported automobiles with a price greater than or equal to the lowest priced of these automobiles are included in this class.

After 1977, the size classifications listed above for passenger automobiles will no longer be applicable owing to the downsizing of each manufacturer's model types. Thus, classifications based upon the traditional method of determining size (wheelbase) will not be valid for the 1978-85 period. Instead, all size classifications used in this report are a function of wheelbase, engine size, interior space, weight, price, and other related factors. For the purpose of this study, whenever subcompact is mentioned, it is

assumed that this is the smallest classification for that particular year, but it is not necessarily directly comparable in actual weight, wheelbase, and so forth, with a subcompact of any previous year. This relationship also holds true for all other size classifications (i.e., compact, mid-size, and full-size). In other words, all size classifications are relative to the specific year in question and are not to be construed as absolutes or constants over the 1977-85 period. Furthermore, for purposes of the projections in this report, each size class is assumed to be downsized by about 30 percent in terms of curb weight and by about 40 percent in terms of engine displacement over the period 1977-1985.

6. United States/Canadian automobiles consist of automobiles produced in the United States and/or Canada by firms headquartered in the United States or Canada. It does not include United States- or Canadian-made automobiles produced by such firms as Volvo or Renault which are headquartered in third countries, nor does it include vehicles such as the Chevy Luv or Ford Courier which are assembled in the United States from mostly third-country components. Also excluded from the definition are "captive imports" as defined in item number 7.

7. Imported automobile is any new passenger automobile assembled in any country other than the United States or Canada (those under the purview of the Automotive Products Trade Act (APTA)) and imported into the United States. A captive import is an imported vehicle assembled in any country other than the United States or Canada by a

subsidiary of a domestic manufacturer or assembled by a domestic manufacturer in a joint effort with a foreign manufacturer.

8. Employment refers to all persons employed at facilities of the four major domestic automobile manufacturers in which complete passenger automobiles and automotive parts are produced in the United States.

THE PRESIDENT'S PROPOSED NATIONAL ENERGY ACT

General Terms and Objectives

On April 29, 1977, the President of the United States transmitted to the Congress the National Energy Act, a draft of proposed legislation to establish a comprehensive national energy policy. This transmittal was preceded on April 18, 1977, by an address of the President to the people of the United States concerning the national energy situation and by a speech on April 20, 1977, before a Joint Session of the Congress, outlining the President's recommendations for dealing with the nation's energy problems.

The objective of the National Energy Act is to provide a comprehensive national energy policy in response to the increasing demand for energy and its decreasing supply, particularly of oil and natural gas. This policy is intended to stem the increasing dependency of the United States on foreign oil markets and the vulnerability of the United States to interruptions of foreign oil supply, to conserve the existing oil and natural gas resources of the United States, and to enhance the efficiency of the use of the Nation's energy resources.

In section 3 of the National Energy Act, six goals of the national energy policy to be attained by 1985 are specified as follows:

(1) Reduction of annual growth of United States energy demand to less than 2 percent.

(2) Reduction of the level of oil imports to less than 6 million barrels per day.

(3) Achievement of a 10-percent reduction in gasoline consumption from the 1977 level.

(4) Insulation of 90 percent of all American homes and all new buildings.

(5) An increase in annual coal production by at least 400 million tons over 1976 production.

(6) Use of solar energy in more than two and a half million homes.

The provisions of the National Energy Act, which are intended to assure that these goals are met, are divided into two titles. Title I consists of the National Energy Act's nontax provisions, and title II consists of tax measures.

The nontax provisions in title I of the National Energy Act are divided into seven parts. Part A provides for energy conservation programs for residential buildings. Part B provides for energy efficiency standards for consumer products other than automobiles, and energy efficiency disclosure requirements for consumer products. Part C provides for an energy conservation program for schools and hospitals. Part D provides for a pricing program for natural gas intended to reduce the demand for natural gas and increase its supply, and for an extension of the allocation provisions of the Emergency National Gas Act of 1977. Part E provides for a national public utility regulatory policy. Part F provides for amendments to the Energy Supply and Environmental Coordination Act of 1974 to encourage conversion to coal and other fuels for the generation of electricity and other purposes. Finally, Part G provides for certain energy initiatives on the part of the Federal Government, including the public demonstration of solar heating and cooling technology.

The tax measures contained in title II are divided into six parts. Part A provides for a temporary tax credit allowable against individual income taxes based upon a portion of expenditures for energy conservation equipment and solar energy equipment in the taxpayer's principal residence. Part B contains tax measures intended to encourage energy conservation in transportation. Included in this part is the Fuel Efficiency Incentive Tax proposal, the standby gasoline tax and rebate proposal, a proposal to rescind the credit or refund of the tax paid on fuel used in motorboats, a proposal to increase the taxes on noncommercial aviation fuel, and a proposal to exempt all buses from the 10-percent excise tax imposed under present law. Part C provides for a temporary investment tax credit of generally 20 percent for property which is business energy property as defined in the proposal and which otherwise qualifies for the investment tax credit. Part D provides for a crude oil equalization tax. Part E provides for oil and gas consumption taxes and rebates intended to make the cost of commercial use of natural gas equivalent per Btu to the cost of commercial use of Number 2 distillate oil. Part F provides for certain energy development tax incentives, including geothermal steam development incentives.

The Fuel Efficiency Incentive Tax proposal which is the subject of this study, is contained in sections 1201-1204 of the proposed National Energy Act. Section 1201, which provides for a fuel inefficiency tax, would create a new section 4064 of the Internal Revenue Code of 1954 (26 USC 4064).

Section 1202, which provides for a fuel efficiency rebate, would create a new section 6429 of the Code (26 USC 6429). Section 1203 provides for recording of receipts and payments under the proposal, and authorizes the appropriation of such amounts. Section 1204 provides that the amendments of sections 1201 and 1202 shall apply to sales by the manufacturer after the date of enactment of the act, except as otherwise specified therein.

Fuel Efficiency Incentive Tax Proposal, Subpart 1 of Part B of Title II of the National Energy Act

While the Fuel Efficiency Incentive Tax proposal is a tax measure, it is not intended to provide a net revenue; it is rather a system of manufacturers excise taxes and rebates designed to manipulate the retail prices of automobiles to influence buying patterns in the U.S. market. 1/

Technical analysis

A graduated excise tax (the Fuel Inefficiency Tax) would be imposed on the sale 2/ of new passenger automobiles and other new light-duty vehicles whose fuel economy, by model type, fails to meet the average fuel economy standard required for each manufacturer under the Motor Vehicles Information and Cost Savings Act, as amended by the Energy Policy and Conservation Act (EPCA) (15 USC 2001 et seq.). In addition, an amount equal to the tax collected each year would be rebated (the Fuel Efficiency Rebate) from the General Fund to manufacturers and then paid to purchasers of passenger automobiles and other light-duty vehicles which exceed the average fuel economy standard for that year, pursuant to a graduated schedule established for the industry as a whole.

1/ No manufacturers excise tax is imposed under present law upon the sale of passenger automobiles or light-duty trucks or buses. Section 401 of the Revenue Act of 1971 amended 26 USC 4061 to repeal the 7 percent manufacturers excise tax on chassis and bodies for passenger automobiles and the 10 percent manufacturers excise tax on chassis and bodies for light-duty trucks and buses (those having a GVW of 10,000 pounds or less). The Energy Policy and Conservation Act of 1974 (EPCA) amended the Motor Vehicle Information and Cost Savings Act (15 USC 2002) by establishing mandatory average fuel economy standards effective with model year 1978 for passenger automobiles and with model year 1979 for other four-wheeled light-duty highway vehicles. This act, which provides for civil penalties if a manufacturer fails to comply with these standards, is described in more detail in the section on present law affecting fuel economy.

2/ Consumers may avoid the impact of the tax by importing automobiles purchased outside the United States. Further, if a U.S./Canadian type automobile is purchased in Canada, it is entitled to duty-free treatment when imported into the United States. See p. 45 of this report.

Fuel Inefficiency Tax (§ 1201).--The Fuel Inefficiency Tax proposal provides for a new graduated excise tax on sales of automobiles whose fuel economy, by model type, fails to meet the average fuel economy standard required for each manufacturer for the applicable class of automobiles 1/ under the EPCA. The tax would apply to passenger automobiles for the model year 1978 and thereafter, and to classes of nonpassenger automobiles for the model year 1979 and thereafter. A tax schedule and an alternative tax are provided to accomplish this end.

The proposed tax schedule would establish a fuel economy standard at which no tax would be imposed as follows:

Model year	Fuel Economy Standard (miles per gallon)
1978	18
1979	19
1980	20
1981	21.5
1982	23
1983	24.5
1984	26
1985 and thereafter	27.5

1/ Under the EPCA the Secretary of Transportation is authorized to determine classes of nonpassenger automobiles (15 USC 2002(b)). Nonpassenger automobiles essentially include four-wheeled vans, trucks and jeep type vehicles weighing less than 6,000 pounds, and those vehicles over 6,000 pounds but less than 10,000 pounds which the Secretary of Transportation determines (1) are the types of vehicles for which average fuel economy standards would be feasible and (2) either such standards would result in significant energy conservation or such vehicles are the types of vehicles which are used substantially for the same purposes as vehicles weighing 6,000 pounds or less.

These standards are identical to the average fuel economy standards required by the EPCA for the model years 1978, 1979, 1980, 1985, and thereafter, but would differ for the model years 1981-1984. 1/

The amount of tax would increase geometrically for each mile-per-gallon decrease in fuel efficiency below the fuel economy standard. 2/ For example, for the 1980 model year no tax would be imposed at 20 mpg or better while a tax of $111 would be imposed at 18 mpg and a tax of $249 would be imposed at 16 mpg. The maximum tax for the 1980 model year would be $666, to be imposed at 13 mpg or less. The schedules are set out at page 29.

The alternate tax would apply if the average fuel economy standard required under the EPCA for a class of automobiles 3/

1/ The average fuel economy standards required by the EPCA for model years 1981 to 1984 were administratively determined by the Secretary of Transportation; at the time the President submitted the proposed National Energy Act to the Congress, they had not been determined. On June 26, 1977, standards for these interim model years were announced as follows:

Model year	Average Fuel Economy Standard (miles per gallon)
1981	22.0
1982	24.0
1983	26.0
1984	27.0

2/ Essentially, the tax is computed by multiplying a specified-tax correction factor by the number of additional gallons of gasoline an automobile failing to meet the fuel economy standard would consume for 100,000 miles traveled over that which an automobile meeting that standard would consume. The specified "tax correction factor" set forth in the proposal (section 1201(a)) is as follows:

	Cents
1978	16.16
1979	18.04
1980	20.00
1981	23.10
1982	29.08
1983	33.00
1984	40.55
1985 and thereafter	49.14

3/ While classes of nonpassenger automobiles are determined by the Secretary of Transportation under the EPCA (15 USC 2002(b)), classes of automobiles are not specified.

in a model year differs from the fuel economy standard described in the schedule. 1/ The Secretary of the Treasury would issue a table modifying the tax on the basis of the average fuel economy standard set by the Secretary of Transportation for a class of automobiles, so that no tax would be imposed at that level. The alternative tax would increase with each mile per gallon decrease in fuel efficiency in a manner similar to that provided in the base tax, even though beginning at the alternate, or EPCA level. Nevertheless, the modified maximum tax under the alternate proposal would not exceed the maximum tax for the year in question provided in the base tax. It simply would be reached at a different level.

The proposal also would provide for the payment of the fuel inefficiency tax in cases where an automobile is leased rather than sold. In general, the tax would be paid pro rata in accordance with the receipt of payments under the lease. Where the total tax was not paid at the time a leased automobile was sold or otherwise disposed of, the balance of the tax would then be payable.

Unlike present law with respect to the manufacturers excise tax, the sale of automobiles to State or local Governments and to nonprofit educational institutions would not be exempt from the fuel inefficiency tax.

1/ This will apparently be the case for the model years 1981-1984, since the Secretary of Transportation has set average fuel economy standards for those years under the EPCA higher than the fuel economy standard described in the tax proposal. For the model year 1978, when the tax applies only to passenger automobiles, the alternative tax appears to be superfluous, since the average fuel economy standard that year under the EPCA is specified by law as 18 mpg (15 USC 2002(a)), and the alternative tax apparently does not contemplate a modification of the average fuel economy standard for a model year obtained by a particular manufacturer under 15 USC 2002(d). If a manufacturer obtained a modification of the average fuel economy standard under 15 USC 2002(d), he could be put in the position of having a tax imposed on automobiles which meet the modified average fuel economy standard applicable to him under the EPCA.

Fuel Efficiency Rebate (§1202).—The Fuel Efficiency Rebate proposal would establish a graduated rebate from the General Fund to be paid or credited to manufacturers on the basis of their sales of fuel-efficient automobiles, i.e., those automobiles exceeding the applicable fuel efficiency standard under the proposal. The rebate would be paid or credited to the manufacturer only if he has evidence (as required by the Secretary of the Treasury by regulation) of payment of the rebate to the ultimate purchaser of the automobile upon which the rebate is calculated.

The proposal would apply to sales of passenger automobiles produced in the United States and Canada after May 1, 1977 (which includes part of the 1977 model year), and to classes of nonpassenger automobiles produced in the United States and Canada in the model year 1979 and thereafter. With respect to automobiles manufactured in other countries, rebates would be available only on the basis of executive agreements entered into between those countries and the United States. Such an executive agreement would be designed to assure that U.S. manufacturers are not disadvantaged on a competitive basis with foreign manufacturers by the Fuel Efficiency Incentive Tax proposal. The proposal would establish a set of base rebates for each model year and an alternative base rebate for passenger automobiles.

The base rebates increase geometrically for each mile-per-gallon increase in fuel efficiency over the applicable fuel efficiency standard for a model year on the basis of a formula similar to that used for the

93-188 O - 77 - 3

calculation of the fuel inefficiency tax. 1/ Nevertheless, the amount of the rebate which would be payable on an automobile exceeding the applicable fuel efficiency standard by a certain number of miles per gallon is less than the amount of tax payable on a comparably inefficient automobile. The amounts of the tax and rebate are calculated in proportion to the amount of fuel wasted or saved by an automobile over 100,000 miles traveled in comparison with the amount consumed by an automobile meeting the applicable standard, and the fuel savings for each mpg increase in fuel efficiency decreases geometrically as the fuel efficiency of the automobile increases. 2/ As with the fuel inefficiency tax, the Secretary of the Treasury would prescribe alternate base rebate tables

---

1/ The base rebates are computed on the basis of the number of gallons of gasoline saved (as opposed to wasted under the fuel inefficiency tax) by an automobile exceeding the fuel economy standard for model year, as opposed to an automobile meeting that standard, for 100,000 miles traveled, multiplied by a specified "base rebate correction factor", which is the same as the "tax correction factor". See p. 23, n. 2. Purchasers of electric motor vehicles would be entitled to the highest applicable rebate. An electric automobile would be defined as an automobile powered primarily by an electric motor drawing current from rechargeable storage batteries or other portable sources of electric current.

2/ For example, assume 100,000 miles traveled. If the fuel economy of an automobile were increased from 10 mpg to 20 mpg, an increase of 10 mpg, the fuel consumed would be halved, with a savings of 5,000 gallons. However, if the fuel economy of an automobile were increased from 20 mpg to 30 mpg, an increase of 10 mpg, the fuel consumed would be reduced by one third, with a savings of 1,667 gallons.

if the Secretary of Transportation prescribed an average fuel economy standard for passenger automobiles of a model year under the EPCA which differs from the fuel economy standard provided in the bill. While section 1202(f) of the bill, which provides for the alternate base rebate schedule, refers to "any class of passenger automobiles" it is not immediately apparent that the Secretary of Transportation is authorized to designate classes of passenger automobiles under the EPCA. He is authorized to designate classes of nonpassenger automobiles under the EPCA (15 USC 2002(b)), and has done so for nonpassenger automobiles weighing less than 6,000 pounds. 1/

With respect to any class of nonpassenger automobiles, 2/ the rebate would apply somewhat differently. If the average fuel economy standard set for any class of nonpassenger automobiles under the FPCA for a model year 3/differs from the average fuel economy prescribed for passenger automobiles under the EPCA for a model year, then the alternate base rebate schedule for nonpassenger automobiles will be established on the basis of the higher average fuel economy standard. 4/

1/ See 42 F.R. 13807.

2/ Section 1202(a) of the proposal would add a new section 6429(f) of the Internal Revenue Code of 1954 which correctly refers to nonpassenger automobiles. However, new section 6429(g) refers to automobiles, which under the EPCA, include passenger automobiles (15 USC 2001).

3/ The average fuel economy standard for any class of nonpassenger automobiles is to be administratively set by the Secretary of Transportation on the basis of his determination of the maximum average fuel economy level attainable for that class of automobiles in model years 1979 and thereafter (15 USC 2002(b)).

4/ The Secretary of Transportation has determined average fuel economy standards for nonpassenger automobiles weighing not more than 6,000 pounds for the model year 1979 as follows: The standard for four-wheel drive nonpassenger automobiles which are jeep-type vehicles is 15.8 mpg. The standard for all other nonpassenger automobiles (including pickup trucks and vans) weighing not more than 6,000 pounds is 17.2 mpg. The standard for passenger automobiles is 19.0 mpg for the model year 1979.

The proposal provides that the estimated amount of the rebates payable in a model year would approximate as closely as possible the estimated tax receipts in that model year under the fuel inefficiency tax. Thus, the amounts in the rebate schedules (or the alternate base rebate schedules, as the case may be) would be multiplied by a rebate coefficient, determined for the model year by the Secretary of the Treasury, to determine the amounts of the rebates actually payable or creditable to the manufacturer on the basis of his sales of fuel-efficient vehicles. In no event would the amount of the rebate exceed $500. The proposal would authorize the appropriation of funds necessary for the payment of the fuel efficiency rebates.

The bill would also amend the Motor Vehicle Information and Cost Savings Act (as previously modified by EPCA) to require that the label required by such act to be affixed to each automobile state that the automobile was subject to the tax or rebate and the amount of the tax or rebate.

Tax and rebate schedule for new car sales

Miles per gallon		Tax or rebate[1]							
At least	But less than	1978	1979	1980	1981	1982	1983	1984	1985
	12.5				$935		$1,524		$2,488
12.0	13.0	$449	$553	$666		$1,159		$1,819	
12.5	13.5				774		1,294		2,146
13.0	14.0	345	436	538		972		1,559	
13.5	14.5				637		1,098		1,854
14.0	15.0	256	339	438		812		1,336	
14.5	15.5				519		929		1,603
15.0	16.0	179	258	333		674		1,143	
15.5	16.5				416		782		1,384
16.0	17.0	112	176	249		553		974	
16.5	17.5				325		653		1,192
17.0	18.0	52	111	176		446		825	
17.5	18.5				245		539		1,021
18.0	19.0	0	52	111		351		693	
18.5	19.5				174		437		869
19.0	20.0	−47	0	52		266		574	
19.5	20.5				110		345		733
20.0	21.0	−89	−47	0		189		467	
20.5	21.5				52		262		610
21.0	22.0	−128	−90	−47		120		371	
21.5	22.5				0		188		499
22.0	23.0	−163	−129	−90		57		283	
22.5	23.5				−47		119		397
23.0	24.0	−195	−165	−130		0		203	
23.5	24.5				−91		57		304
24.0	25.0	−224	−197	−166		−52		129	
24.5	25.5				−131		0		219
25.0	26.0	−251	−227	−199		−101		62	
25.5	26.5				−168		−52		140
26.0	27.0	−276	−255	−230		−145		0	
26.5	27.5				−202		−101		67
27.0	28.0	−299	−281	−259		−187		−57	
27.5	28.5				−234		−147		0
28.0	29.0	−321	−305	−285		−225		−111	
28.5	29.5				−264		−189		−62
29.0	30.0	−341	−327	−310		−261		−161	
29.5	30.5				−291		−228		−121
30.0	31.0	−359	−348	−333		−295		−207	
30.5	31.5				−317		−265		−176
31.0	32.0	−377	−367	−354		−326		−251	
31.5	32.5				−340		−299		−227
32.0	33.0	−393	−385	−374		−355		−292	
32.5	33.5				−363		−331		−275
33.0	34.0	−408	−402	−393		−383		−330	
33.5	34.5				−385		−361		−302
34.0	35.0	−423	−416	−411		−409		−366	
34.5	35.5				−405		−390		−320
35.0	36.0	−436	−433	−428		−433		−400	
35.5	36.5				−423		−417		−403
36.0	37.0	−449	−448	−444		−456		−433	
36.5	37.5				−441		−442		−440
37.0	38.0	−461	−461	−459		−478		−463	
37.5	38.5				−458		−467		−476
38.0	39.0	−473	−474	−473		−499		−492	
38.5	39.5				−474		−490		−493
39.0		−473	−474	−473		−499		−492	
Electric cars		−473	−474	−473	−474	−499	−490	−492	−493

[1] Negative amounts are the proposed rebates.

NOTE.—Amounts below the diagonal (the zeros) are rebates (−) and those above are tax. The amount between the dashed lines apply to the whole dollar brackets until 1981 when the tax begins to apply to the half-mile brackets. The brackets move up one-half mile per year through 1985 (the dashed lines move toward the righthand corner) so that in 1982, the tax applies to the whole-mile brackets, in 1983, to the half-mile brackets again, in 1984 to the whole-mile brackets, and in 1985 to the half-mile brackets.

Executive agreements and GATT considerations

Under the Fuel Efficiency Incentive Tax proposal, the rebates payable or creditable to manufacturers on the basis of their sales of fuel-efficient automobiles are to approximate the total receipts collected from the imposition of the fuel inefficiency tax on sales of fuel-inefficient automobiles. The amount of rebates creditable or payable to each manufacturer is not limited to the fuel inefficiency tax receipts collected on sales by that manufacturer. Thus, manufacturers whose automobiles have high average fuel economies would be afforded, under the proposal, the benefit of a competitive average price advantage against those manufacturers which have lower average fuel economies. Since the average fuel economy of the automobiles manufactured by most foreign producers is significantly higher than that of the U.S. automobile manufacturers, 1/ the unqualified participation of these manufacturers in the Fuel Efficiency Incentive Tax proposal could cause serious competitive harm to the U.S. producers of automobiles. Accordingly, the proposal provides that rebates would be available with respect to the sale of automobiles manufactured in countries other than Canada only to the extent provided in executive agreements entered into with such foreign countries, as a measure to control the amount and nature of competition between U.S. and foreign producers in the U.S. market. Section 1202(a) of the proposed act provides that:

> Any executive agreement entered into with any country to provide for a payment or credit under this section shall be designed to assure that manufacturers of domestically manufactured automobiles are not disadvantaged by the system of taxes under section 4064 (The Fuel Inefficiency Tax) and this section.

1/ For example, the sales-weighted average fuel economy figures for several major manufacturers and importers in the model year 1977 are as follows: Nissan 27.1, Toyota 28.1, VW (excluding Prosche and Audi) 30.4, G.M. 18.4, Ford 17.1, and Chrysler 16.6.

These agreements raise several matters which warrant consideration in light of the obligations of the United States under the General Agreement on Tariffs and Trade (GATT).

As is required by the most-favored-nation obligations of the United States under article I of the GATT, the agreements would apparently have to conform to a single, standard agreement uniformly applicable to all the countries involved, and a waiver from those obligations would have to be obtained under article XXV(5), 1/ with respect to imports from Canada. It is also conceivable that the waiver obtained by the United States to its most-favored-nation obligations under the GATT with respect to automobiles imported from Canada under the Automotive Products Trade Act of 1965 might be jeopardized by any agreements negotiated pursuant to the Fuel Efficiency Incentive Tax proposal. That waiver was granted under

---

1/ Under the Fuel Efficiency Incentive Tax proposal, U.S./Canadian type automobiles (having a U.S./Canadian value added content of at least 75 percent) imported from Canada are treated as domestic automobiles, and rebates are payable on sales of such automobiles without the execution of any such executive agreement. This treatment differs from that to be accorded imports from third countries.

the condition that there be no significant diversion of international trade as a result of the operation of the act.

While the proposal would make rebates available to foreign manufacturers only to the extent provided for in executive agreements with the foreign countries involved, the sale by these manufacturers of fuel-inefficient vehicles would nonetheless be unconditionally subject to the imposition of the fuel inefficiency tax. Article III, paragraphs 1 and 2, of the GATT provide that--

> 1. The contracting parties recognize that internal taxes and other internal charges, and laws, regulations and requirements affecting the internal sale, offering for sale, purchase, transportation, distribution or use of products, and internal quantitative regulations requiring the mixture, processing or use of products in specified amounts or proportions, should not be applied to imported or domestic products so as to afford protection to domestic production.
>
> 2. The products of the territory of any contracting party imported into the territory of any other contracting party shall not be subject, directly or indirectly, to internal taxes or other internal charges of any kind in excess of those applied, directly or indirectly, to like domestic products. Moreover, no contracting party shall otherwise apply internal taxes or other internal charges to imported or domestic products in a manner contrary to the principles set forth in paragraph 1.

While the obligations of the United States under article III do not prevent the payment of subsidies, including those derived from the the proceeds of uniformly applied internal taxes to domestic producers, the proposal's excise taxes and rebates are applied to products and not manufacturers, and the obligations of the United States under article III might be brought up in opposition to any executive agreement limiting the extent to which the rebate would be applicable to sales

of foreign automobiles. In any event, the issue of our obligation under article XVI for notification could be raised to the extent the proposal operated directly or indirectly to reduce imports of automobiles from the countries involved.

Further, the issue of possible suspension of prior tariff concessions by our trading partners under article XXIII of the GATT may be raised on the grounds that the proposal and its implementing agreements impair tariff concessions already granted by the United States.

Under the Treaties of Friendship, Commerce and Navigation signed by the United States with Italy, Japan, and West Germany, the United States is obligated, pursuant to article XIV, to afford imported products of the contracting party most-favored-nation treatment, and pursuant to article XVI, to afford to imported products treatment "no less favorable" than the treatment afforded domestic products. Thus, the treaty obligations of the United States would also raise matters to be considered in the negotiation of any executive agreements under the proposal.

PRESENT LAW AFFECTING FUEL ECONOMY

Over the past several years the U.S. automotive industry has become increasingly regulated. The laws and regulations which affect the automotive industry are the result of the ever-growing awareness of the effect of this sector of the economy on the U.S. economy as a whole and on the general well-being of the Nation. Their impact on the structure of the U.S. automotive industry and their influence on the type of automobile the American public drives have become significant. One of the major areas of regulation is designed to decrease the amount of gasoline consumed by the automobile fleet by requiring new vehicles to meet minimum fuel economy standards. Other laws regulating different aspects of the automotive industry tend to have a negative impact on fuel economy.

The Motor Vehicle Information and Cost Savings Act, as amended by the Energy Policy and Conservation Act

The Motor Vehicle Information and Cost Savings Act (15 USC 1901 et seq.) 1/ (hereafter referred to as "the Act"), as amended by the Energy Policy and Conservation Act (15 USC 2001-2012) 2/, imposes mandatory fuel economy standards for automobiles manufactured in or imported into the United States beginning with the 1978 model year.

1/ Pub. L. No. 92-513; 86 Stat. 947 (1972).
2/ Pub. L. No. 94-163; 89 Stat. 901 (1975) (see appendix E for full text).

The average fuel economy standard for passenger automobiles for each manufacturer, as established by § 502(a)(1) of the Act (15 USC 2002(a)(1)) shall be as follows:

For model year	Average fuel economy standard
1978	18.0 mpg
1979	19.0 mpg
1980	20.0 mpg
1981	22.0 mpg 1/
1982	24.0 mpg 1/
1983	26.0 mpg 1/
1984	27.0 mpg 1/
1985 and thereafter	27.5 mpg

Under § 502(b) of the Act (15 USC 2002(b)) the Secretary of Transportation was required to prescribe standards for nonpassenger automobiles for model year 1979 and thereafter. As defined by § 502 of the Act (15 USC 2002) a nonpassenger automobile is any four-wheeled highway vehicle rated at not more than 6,000 pounds gross vehicle weight (GVW) and not primarily designed for use in transportation of 10 individuals or less, and any vehicles rated at more than 6,000 pounds GVW but less than 10,000 pounds GVW which the Secretary determines by rule to be a type of vehicle for which average fuel economy would be feasible, and that either such standards would result in significant energy conservation or that such a vehicle is a type substantially used for the same purposes as the above-mentioned vehicles weighing 6,000 pounds GVW or less. On March 8, 1977, the Secretary ruled (42 F.R. 13807 (March 14, 1977)) that for nonpassenger automobiles which are rated at not more than 6,000 pounds GVW, the fuel economy standard for model year 1979 shall be (1) 15.8 mpg for four-wheel drive nonpassenger automobiles which are jeep-type vehicles and (2) 17.2

1/ Pursuant to § 502(a)(3) of the Act (15 USC 2002(a)(3)), or June 26, 1977, the Secretary prescribed interim standards for model years 1981-84 (42 F.R. 33534-33470 (June 30, 1977)). These standards were established at a level considered by the Secretary to be the maximum feasible fuel economy level for the model years in question and, at the same time, to result in steady progress in meeting the 1975 standard. When determining the maximum feasible average fuel economies the Secretary did so upon consideration of their (1) technological feasibility; (2) economic feasibility; (3) the effect of other Federal motor vehicle standards on fuel economy; and (4) the need of the Nation to conserve energy (see § 502(e) of the Act (15 USC 2002(e)).

mpg for all other nonpassenger automobiles (including pickup trucks and vans). For any vehicle rated at over 6,000 but less than 10,000 pounds GVW, the Secretary decided that, at the time of the proposed rulemaking, the establishment of fuel economy standards for those vehicles was not feasible owing to the lack of adequate data on which such a decision should be made (41 F.R. 52087-52088 (Nov. 26, 1976)). Since the Secretary's March decision, President Carter has directed him to promulgate regulations, setting forth, pursuant to § 502 (1)(b) of the Act (15 USC 2001(1)(b)), those vehicles weighing between 6,000 and 10,000 GVW which also will be subject to prescribed average fuel economy standards.

Under § 502(f)(1) of the Act (15 USC 2002(f)(1)) those standards established by the Secretary for passenger automobiles manufactured during model years 1981-84 and those standards set for nonpassenger automobiles manufactured after model year 1979 may be amended by the Secretary as he deems necessary. Under § 502(a)(4) of the Act (15 USC 2002(a)(4)) the Secretary may also amend the standard for the model year 1985 and subsequent model years to a level which he determines to be the maximum feasible average fuel economy level for the model year. However, he may not set the standard below 26.0 mpg or above 27.5 mpg without congressional approval. As stated in § 502(f)(2) of the Act (15 USC 2002(f)(2)), if the Secretary amends any standard so as to render it more stringent, he must promulgate the order at least 18 months in advance of the model year in which it is to take effect.

Within 24 months of the model year in question, a manufacturer may, in accordance with § 502(d) of the Act (15 USC 2002(d)), apply for a modification of the average fuel economy standard as it pertains to him for model years 1978, 1979, or 1980. The Secretary may reduce the fuel economy standard for the manufacturer if (1) the manufacturer demonstrates that it "applied a reasonably selected technology" in attempting to meet the standard and (2) a Federal standards fuel economy reduction, as defined in the section, is likely to exist for such manufacturer for the model year to which the application relates.

The average fuel economy standard for passenger automobiles as calculated under § 503 of the Act (15 USC 2003) is a production-weighted average of the fuel economy of a manufacturer's entire production of passenger automobiles in a model year. This average is arrived at by calculating a harmonic mean. 1/ Under the act the harmonic mean is arrived at by dividing (a) a manufacturer's total production of passenger automobiles for a given model year by (b) a sum of terms, each term being a fraction arrived at by dividing (1) a manufacturer's total model-year production of a given model of passenger automobiles by (2) the fuel economy measured for such model as established by the Environmental Protection Agency (EPA). Those domestically produced passenger automobiles which a manufacturer exports are excluded from its total production. While imports must also meet

---

1/ When averaging miles per gallon across a series of autos, the harmonic mean or average is the inverse or reciprocal of the average gallons per mile of the cars. The reciprocal of a number equals one divided by that number. For example, if there are two cars, one with mileage rating of 10 and the other with a mileage rating of 20, the harmonic mean is 13 1/3 mpg, as contrasted with the arithemetic mean of 15 mpg. (The average of 1 over 10 and 1 over 20 is 1 over 13 1/3.) Generally, average of gas mileage are computed harmonically.

the standards, a domestic manufacturer may not average in its imports from countries other than Canada when calculating its fleet's fuel economy average; the domestically produced and the imported fleets are considered separately when establishing this average. An automobile is considered to be 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 . . ." (§ 503(b)(2)(E) of the Act (15 USC 2003(b)(2)(E)).

For the 1978 and 1979 model years a domestic manufacturer may include a certain number of imported automobiles in its total production figure, the number to be the lesser of (a) the manufacturer's base import volume or (b) the number arrived at by multiplying the quotient obtained by dividing the manufacturer's base import volume by its base production volume times its total production for the particular model year. "Base import volume" is defined as one-half the sum of a manufacturer's total 1974 imports plus 133 percent of the manufacturer's total imports during the first 9 months of model year 1975. "Base production volume" is equal to one-half the manufacturer's total 1974 production plus 133 percent of its total production for the first 9 months of model year 1975. 1/

1/ Volkswagen Manufacturing of America, Inc., which will shortly be producing in the United States, is faced with a unique situation due to the division of fleets into domestically produced and imported categories for purposes of calculating fuel economy averages. Once Volkswagen's production at its New Stanton, Pa., plant reaches 75 percent American or Canadian value added, their fleet will be divided, putting their most fuel-efficient automobiles into one category (those domestically produced) and their most fuel-inefficient in the other (those imported). Volkswagen does not believe that the intent of Congress was to make it difficult for a former importer to manufacture in the United States. Rather, it is Volkswagen's opinion that Congress wished to avoid the situation where a domestic manufacturer would "offset the lower fuel economy average of cars imported from its foreign subsidiaries." ("Statement of Volkswagen of America, Inc., Before the Department of Transportation Regarding Automobile Fuel Economy," March 22, 1977, p. 4.) For this reason Volkswagen does not believe that its fleet should be divided for calculating fuel economy averages.

The average fuel economy standard is weighted in such a manner that a manufacturer which produces a certain number of fuel-inefficient vehicles must produce a larger number of comparably more fuel-efficient vehicles to offset the "gas-guzzlers". The calculation is made on the assumption that all vehicles travel the same number of miles and, thus, given a certain fuel consumption standard, a larger number of fuel-efficient cars are needed to outweigh the consumption of the more fuel-inefficient cars. For example, assume that a manufacturer produced 10 automobiles rated at 20 mpg during a year when the mandated standard was 25 mpg. To meet the 25 mpg standard for its fleet this manufacturer must produce 15 automobiles having a fuel economy of 30 mpg.

Those manufacturers which fail to meet the required average fuel economy standards for their fleets are subject to a civil penalty of $5 for each 0.1 mpg by which they fail to meet the standard, multiplied by their volume of production. If a manufacturer were to fall short of the fuel economy standard by as little as 1.0 mpg the penalty due would be very substantial. For example, if General Motors Corporation were to miss the fuel economy average by 1.0 mpg on a 5 million unit production volume, it would incur a penalty of $250 million in before-tax dollars. Ford estimates its penalty for falling short of the fuel economy average by 1.0 mpg to be approximately $150 million. 1/ If the manufacturer should exceed the standard for a given year the excess may be carried over to the next model year or may be credited to the previous model year for any fines it was or shall be liable.

1/ "Statement by Ford Motor Company to Public Hearing Held by the U.S. International Trade Commission", p. 2 (July 6, 1977).

Other Laws Affecting Fuel Economy

Several other laws affecting the automotive industry have been enacted, the two most important being the Clean Air Act of 1963, as amended (42 USC 1857 et seq.), 1/ and the Motor Vehicles Safety Act of 1966, as amended (15 USC 1391), 2/ Although they were passed with the intent of regulating other aspects of the automotive industry, these laws also have a direct effect on fuel economy.

The first laws requiring specific reductions in the noxious emissions of passenger automobiles and setting compliance dates by which ultimate standards are to be reached (1975 for hydrocarbon and carbon monoxide emissions, and 1976 for emissions of oxides of nitrogen) were passed as part of the Clean Air Act Amendments of 1970. 3/ These required reductions came after years of research into and limited regulatory authority over auto emissions. The first major side effect of these new regulations was a drastic reduction in fuel economy; for 1974 models there was a fuel economy penalty of about 12 percent in comparison with those vehicles with no emission controls. Owing to the introduction of the catalytic converter this loss has been reduced, but the negative effect remains significant.

Since 1970 the dates of compliance with the ultimate emission standards, as well as the interim standards set by the Administrator of the Environmental Protection Agency (in view of achieving the reductions) have been continually deferred. For the most part, this has been due to the inability of the manufacturers to meet the required levels with

---

1/ Pub. L. No. 86-206; 77 Stat. 392 (1963), amending the Public Law No. 159 of July 14, 1955, c. 360.
2/ Pub. L. No. 89-563; 80 Stat. 718 (1966).
3/ Pub. L. No. 91-604; 84 Stat. 1676 (1970).

available technology. However, since the establishment of fuel economy standards, further deferrals are now being demanded on the basis of the inability of the manufacturers to meet the fuel economy standards while attempting to meet the automotive emissions standards at the same time. There is currently legislation pending before the Congress (S. 252 and H.R. 6161) which calls for further deferrals of compliance for ultimate emission standards and, for certain types of emissions, a relaxation of those ultimate standards. The automakers contend that new emission standards are a necessity if they are to meet the fuel economy standards. However, several Government agencies, as well as the administration, believe that both standards can be met by the compliance dates as they presently stand. The laws establishing these emission standards, the proposed standards pending before Congress, and the effect of various emission standards on fuel economy are included in a more detailed discussion of this subject, found in appendix C, pp. C-2 through C-18 of this report.

The safety features which have been added to new cars, pursuant to the Motor Vehicles Safety Act of 1966, as amended, have also had a detrimental effect on fuel consrvation. While they have made the U.S. automobile among the safest in the world, they have also added additional weight to new vehicles, thereby lowering the fuel economy of those vehicles. Estimates of the fuel penalty suffered because of new safety standards introduced up to the end of 1975 is estimated to be about 4 percent.

According to the material used in and the design of proposed new safety standards the fuel penalty will be increased somewhat in the future. The laws establishing these standards and a more detailed discussion of their effect on fuel economy are also contained in appendix C, pp. C-19 through C-23 of this report.

CUSTOMS TREATMENT

Tariff Treatment

On-the-highway, four-wheeled passenger automobiles imported from those countries receiving most-favored-nation treatment (except for Canada) are entered into the United States under item 692.10 of the Tariff Schedules of the United States (TSUS) at a rate of duty of 3-percent ad valorem. Prior to January 1, 1968, the rate of duty was 6.5 ad valorem. Therefore, the current rate reflects the maximum legal concession which could have been granted by the United States pursuant to the Kennedy Round of trade-agreement negotiations. The history of the tariff treatment for passenger automobiles from 1930 to the present is summarized by the following table.

Changes in U.S. rates of duty applicable to passenger automobiles: 1930 to the present

(Percent ad valorem)

Effective date of rate change	Most-favored-nation rate of duty
June 18, 1930	10
June 30, 1956	9.5
June 30, 1957	9
June 30, 1958	8.5
July 1, 1962	7.5
July 1, 1963	6.5
January 1, 1968	5.5
January 1, 1969	5.0
January 1, 1970	4.5
January 1, 1971	3.5 1/
January 1, 1972	3 2/

1/ From Aug. 16 to Dec. 19, 1971, U.S. imports of passenger automobiles from most-favored nations were subject to a temporary surcharge of 6.5 percent, resulting in an effective rate of duty of 10 percent ad valorem.
2/ This rate still in effect.

Those passenger automobiles imported from Canada falling within the guidelines of the Automotive Products Trade Act of 1965 (see following section) are entered under TSUS item 692.11. These imports currently enter free of duty. Passenger automobiles imported from certain designated Communist-dominated countries are dutiable at 10 percent ad valorem. 1/

Imports of light-duty trucks from most-favored nations (other than Canada) valued at $1,000 or more are entered under TSUS item 692.02 at an ad valorem rate of 8.5 percent. Motor buses brought into the United States from these nations are entered under TSUS item 692.04 at a rate of duty of 4 percent ad valorem. For those imports of light-duty trucks and motor buses which are within the purview of the Automotive Products Trade Act there is currently no duty assessed.

The Automotive Products Trade Act 2/

The Automotive Products Trade Act was enacted basically to authorize the President to implement the "Agreement Concerning Automotive Products Between the Government of the United States and the Government of Canada," signed January 16, 1965. Fundamentally, the agreement obligates both of the contracting parties (the United States and Canada) to accord duty-free treatment to imports from the other party of specified motor vehicles and parts for use as original equipment in the manufacture of such motor

---

1/ Neither imports from designated Communist-dominated countries nor Canadian imports were affected by the 1971 surcharge.

2/ Pub. L. No. 89-283; 79 Stat. 1016 (1965).

vehicles. 1/ The obligation of the United States to accord duty-free treatment to imports from Canada applies to specified automotive products. First, duty-free treatment applies to motor vehicles, with the exception of certain "special purpose" vehicles, such as electric trolley buses, three-wheeled vehicles, trailers accompanying truck tractors, and motor vehicles specially constructed and equipped for special services and functions (e.g., fire engines). Second, duty-free treatment applies to parts (fabricated components) for use as original equipment in the manufacture of the specified motor vehicles but does not apply to replacement parts. In addition, trailers, tires, and tubes are specifically excluded. Third, the products of Canada specified in the agreement must meet a requirement that they contain no more than a certain percentage of "foreign" content to qualify for duty-free treatment under the agreement. This "foreign" content is the content of materials produced in third countries other

---

1/ At the time of the signing of this agreement and the enactment of the bill implementing it, it was generally admitted that the duty-free treatment limited to automotive products from Canada was inconsistent with the obligation of the United States, under article I of the General Agreement on Tariffs and Trade (GATT), i.e., to accord unconditional most-favored-nation treatment in respect to customs duties on the products of contracting parties to the agreement. However, under article XXV(5), the Contracting Parties of the GATT may grant a waiver of this principle if there are exceptional circumstances to warrant such an action. Such a waiver was sought by the United States and upon consideration of (1) the exceptionally high degree of integration of the two markets, and (2) the opportunities of increased rationalization of production given the "close similarity of market conditions in the two countries and the close relationship which exists and could be further developed in their production facilities of automotive products," (Basic Instruments and Selected Documents, 14th Supp., Geneva, p. 37, (July 1966)), a waiver was granted by the Contracting Parties on December 20, 1965.

than the United States and Canada. For any article, the measure of such "foreign" content will be the percentage of the appraised customs value of the article upon entry into the United States accounted for by the aggregate value of such imported materials contained in the article. The maximum permitted "foreign" content for specified articles is as follows:

Motor vehicles (from January 18, 1965, to January 1, 1968, this figure was 60%)	50% 1/
Chassis and parts	50% 1/

This requirement in effect guarantees that at least half of the content of any article imported duty free under the agreement will be produced in either the United States or Canada. The rest of the content may come from third countries and the article will still be entitled to duty-free treatment when imported into the United States. Consequently, original-equipment parts manufactured in third countries may be assembled into completed vehicles in Canada and imported into the United States, and no duty will be payable on said components, either to Canada (as will be seen) or to the United States, as long as the maximum permissible "foreign" content (50 percent) is not exceeded. However, original-equipment parts imported into the United States from third countries are not entitled to duty-free entry.

Like the obligation of the United States, the obligation of Canada under the agreement to accord duty-free treatment to imports from the United States applies to specified motor vehicles and original-equipment

1/ Under the Motor Vehicles Information and Cost Savings Act, as amended by the Energy Policy and Conservation Act, a vehicle must be 75 percent Canadian-American value added to be considered domestically produced (§ 503(b)(2)(E) of the Act (15 USC(b)(2)(E)).

parts therefor, which excludes "special purpose" motor vehicles, replacement parts, tires, and tubes. While annex A of the agreement does not contain specific content requirements that motor vehicles or original-equipment parts would have to meet to qualify for duty-free entry into Canada, it does restrict duty-free entry to motor vehicles and original-equipment parts imported into Canada by qualified manufacturers of motor vehicles in Canada.

In order to qualify for the right of duty-free entry into Canada for a given class of motor vehicles and original-equipment parts therefor, a Canadian manufacturer of motor vehicles of that class must meet three criteria set forth in annex A of the agreement:

1) The Canadian manufacturer must have produced motor vehicles of that class 1/ in each "quarter" of the base year 2/ and in any subsequent model year;

2) the ratio of the net sales value of the vehicles of that class produced by the manufacturer in Canada 3/ to the net sales value of all vehicles of that class sold by the manufacturer for consumption in Canada must be at least equal to its corresponding ratio for the base year (but no less than 75 to 100); and

3) the "Canadian value added" in the production of vehicles of that class in Canada must be at least equal to its level for the base year.

The Canadian Government did reserve the right to designate "non-qualified" manufacturers of a class of motor vehicles as entitled to the right to duty-free entry under the agreement. However, in order to be entitled to duty-free entry under the agreement, otherwise "non-qualified" manufacturers must generally establish production of motor vehicles of that class in Canada and meet conditions similar to those in (2) and (3)

1/ There are three classes of motor--passenger automobiles, buses, and special commercial vehicles.
2/ The "base year" is the 1964 model year, August 1, 1963-July 31, 1964.
3/ Including vehicles destined for exportation.

above determined for each individual "non-qualified" manufacturer of a class of motor vehicles. Consequently, under annex A of the agreement a manufacturer must qualify as entitled to duty-free treatment for each class of motor vehicles the manufacturer intends to import into Canada under the agreement, and if he fails to qualify for any given class of motor vehicles, the manufacturer must obtain a special designation of entitlement to duty-free treatment in the importation of motor vehicles of that class or original-equipment parts therefor.

Additionally, collateral commitments were made by the Canadian motor-vehicle manufacturers to the Government of Canada in the so-called "letters of undertaking." These "letters of undertaking" involve essentially two different commitments made to the Government of Canada by Canadian motor-vehicle manufacturers to increase the production in Canada of motor vehicles and original-equipment parts, whether for consumption in Canada or for export to the United States. Each Canadian manufacturer committed its corporation to the following:

> (1) To increase in each current model year the "Canadian value added" in its production in Canada of motor vehicles and original-equipment parts over the amount achieved in the base year by a certain percentage 1/ of the growth in the market for the current model year for each class of vehicles sold by the manufacturer for consumption in Canada. Growth in the market is measured by the difference between the cost to the Canadian manufacturer of vehicles sold in Canada during the model year and the cost to the manufacturer of vehicles sold in Canada during the base year, and

---

1/ For automobiles the percentage was 60 percent, for commercial vehicles (trucks) and buses, 50 percent.

(2) to increase the dollar value of "Canadian value added" in the production of vehicles and original-equipment parts over and above both the amount achieved in the base year and the amount of the increase achieved pursuant to (1) above by a certain stated amount 1/ during the 1968 model year, and to maintain that amount in each model year thereafter.

These commitments made to the Government of Canada by the Canadian motor-vehicle manufacturers in their "letters of undertaking" are still binding according to the terms of the letters themselves, which continue in full force and effect.

1/ For the Canadian affiliates of the Big Four motor-vehicle manufacturers, the combined figure was U.S. $222 million.

RECENT TRENDS IN THE U.S. PASSENGER AUTOMOBILE INDUSTRY

The U.S. automobile industry was adversely affected by many different factors during 1974. Total registrations of domestically produced and imported automobiles plummeted from a record 11.4 million units in 1973 to 8.7 million units in 1974, representing almost a 24 percent decline from the previous year. Registration of domestic automobiles decreased from 9.6 million units in 1973 to 7.3 million units in 1974 while registration of imports declined from 1.7 million units in 1973 to 1.4 million in 1974.

One of the primary causes of this decline was the beginning of an economic downturn in the United States which lasted well into 1975. Coupled with the recessionary impact were second-and third-quarter strikes in 1975 in the automobile industry that tended to decrease the supply of many automobile models. Added to these two economic depressants was inflationary pressure in the form of substantial price increases averaging $426 or 8.5 percent for General Motors, $391 or 7.7 percent for Ford, $400 or 8.5 percent for Chrysler, and $284 or 9.9 percent for American Motors. Still another major cause of the decline in automobile sales was the energy crisis of 1973-74.

The 1973-74 period marked the beginning of a new era in the future of the domestic automobile industry. The oil embargo, which lasted approximately 3 months, made the average U.S. automobile consumer acutely aware of his dependence upon imported gasoline from the oil-producing and oil-exporting countries. As gasoline prices increased

from an average of 35 cents per gallon to 55 cents per gallon in a very short time, and the lines at the service stations lengthened because of the gasoline shortage, new car buyers began to seriously consider more fuel-efficient automobiles.

Even though the embargo and long service station lines were short-lived and soon forgotten by many, this period signaled the beginning of the transition from the large, standard-size automobiles to the more fuel-efficient, smaller-size automobiles of the future.

Industry Description

In terms of quantity, four major producers accounted for over 99.9 percent of the total reported domestic output of new passenger automobiles for the 1976 model year and 94.1 percent of the trucks and buses produced in the United States. The four major companies are General Motors Corp., Ford Motor Co., Chrysler Corp., and American Motors Corp. All of these companies are headquartered in the Detroit, Mich. area; and all except the smallest, American Motors, have production and assembly plants in more than one location.

In 1976 there were 45 major assembly plants located in 16 different States. Passenger-automobile-producing States and their shares of 1976 U.S. production in terms of quantity were: Michigan (34.1 percent), Ohio (9.5 percent), Missouri (9.3 percent), California (7.7 percent), Georgia (7.3 percent), New Jersey (6.2 percent), Wisconsin (5.3 percent), Delaware (4.8 percent), Maryland (3.3 percent), Texas (3.1 percent), Kansas (2.7 percent), New York (1.7 percent), Illinois (1.7 percent), Massachusetts (1.2 percent), Kentucky (1.1 percent), and Minnesota (1.0 percent). Virginia averaged almost 1 percent from 1970 to 1974 when Ford ceased assembly at the Norfolk, Va. plant. Also, one small plant located in Florida producing about 500 electric automobiles annually terminated production in late 1976 due to financial difficulties. Other than these two changes, there have not been any appreciable changes in assembly locations during the 1970-76 period.

Volkswagen Manufacturing of America, Inc., a wholly owned subsidiary of Volkswagenwerk AG headquartered in Wolfsburg, West Germany, will begin assembly of a subcompact automobile in the United States sometime during 1978. Volkswagen will be the first major foreign manufacturer to ever produce automobiles witnin the United States. It has purchased a partially completed Chrysler assembly plant located near New Stanton, Pennsylvania, and plans initially to import most of the major components from West Germany. Eventually, almost all of the parts for assembly of the automobile will be produced domestically, but Volkswagen is unsure as to when this will take place. Another foreign producer, the Volvo Group headquartered in Goteborg, Sweden, planned to begin assembly of a Volvo passenger automobile in Norfolk, Va., sometime during 1978, but has currently postponed the opening of the plant.

Total production of new passenger automobiles by domestic manufacturers for the 1976 model year was approximately 8 million units. Of this total, General Motors accounted for 56.8 percent, Ford produced 26.1 percent, Chrysler produced 13.5 percent, American Motors produced 3.5 percent, and the remaining 0.1 percent was produced by small companies such as Checker Motors (primarily taxicabs) and Citicar (small electric autos).

All major U.S. producers of passenger automobiles are multinational firms that import automobiles from their Canadian assembly plants free of duty under the Automotive Products Trade Act. The three largest U.S. manufacturers also have plants or affiliated firms in Western Europe or Japan or both where they produce passenger

automobiles for the world market. Many of these automobiles are imported into the United States for sale to U.S. consumers by the parent companies or their distributing agents. In addition, all of the U.S. producers have manufacturing plants in many of the less-developed countries where automobiles are manufactured for the local market to overcome various tariff and transportation costs.

Factors Affecting Supply and Demand

A number of demographic, economic, and technological variables influence both the supply and the demand for passenger automobiles in the United States. Government policies and consumer preferences also are important determinants of such supply and demand. It should be recognized that these variables do not always act in concert but may conflict.

Absent assumptions about the state of the economy, the factors most likely to influence the supply of new passenger automobiles in the United States include: (1) capacity available within the industry, (2) technology available within the industry, (3) costs of production and (4) labor and material requirements.

Capacity considerations become increasingly important when forecasting automobile sales. If the U.S. automotive industry is operating at peak production levels and demand (or sales) for such vehicles exceeds the U.S. capacity constraint, such demand gaps can be filled only by imported automobiles. Annual U.S. capacity to produce new passenger automobiles is estimated at 10.5 million units. Combined U.S./Canadian capacity is estimated at 12 million units. As indicated below, annual U.S. production, as a percent of domestic capacity, has ranged between 63 and 92 percent since 1972.

New passenger automobiles: United States and Canadian production and capacity utilization, 1972-77

Year	United States	Canada	Total
	Production (million units)		
1972	8.8	1.2	10.0
1973	9.7	1.2	10.9
1974	7.3	1.1	8.4
1975	6.7	1.1	7.8
1976	8.5	1.1	9.6
1977	1/ 9.1	1/ 1.2	1/ 10.3
	Percent		
1972	83.0	80.0	83.0
1973	92.0	80.0	90.0
1974	69.0	73.0	70.0
1975	63.0	73.0	65.0
1976	80.0	73.0	80.0
1977	1/ 86.0	1/ 80.0	1/ 85.0

1/ Estimated by the staff of the U.S. International Trade Commission.

Source: Compiled from various annual issues of Automotive News, 1973 through 1976. Data for 1977 estimated by the staff of the U.S. International Trade Commission.

Technology available within the automotive industry is another important variable influencing the supply of new passenger automobiles in the United States. Technology, as used here, is most directly concerned with applications designed to achieve (1) emission standards and (2) fuel efficiency. Generally, although (1) and (2) tend to be somewhat in opposition since automobiles designed to meet more restrictive emissions regulations frequently sacrifice some fuel efficiency, existing technology available within the automotive industry can achieve a balance by improving engines and transmissions (and other

internal parts) and by reducing weight. Dependent upon the extent of improvement vs. weight reduction (and size) marketability may or may not be adversely affected.

Costs of production are important to automobile manufacturers since increased costs directly and adversely affect each firm's profitability and operating performance. In addition, increased costs of production will very likely affect the U.S. consumer in the form of higher automobile prices. Presently, increased regulation of the auto industry by the Federal Government with respect to emissions standards, safety requirements, and fuel efficiency will very likely continue to influence the type, price, and volume of new passenger automobiles to be produced and sold in the United States.

Labor and material requirements present another constraint upon the supply of new passenger automobiles to be produced in the United States. Generally labor constraints are not a significant hurdle for the automobile producer to overcome; a large supply of ready and able workers is available to the industry and, except for periods of labor unrest or strikes, U.S. automobile producers can most likely continue to balance automated and manual operations within the industry. To meet the more restrictive emissions, safety, and fuel-efficiency standards (existing and proposed) U.S. automobile producers are constantly striving to substitute new materials in passenger automobiles. Plastic and aluminum, for instance, are two materials that are presently being utilized to a greater extent by automobile producers. Dependent upon the material's purpose

93-188 O - 77 - 6

(decorative or protective) and its peculiar characteristics, material costs and their effect on the weight of the automobile have become prime areas of concern for individual manufacturers.

On the demand side of the economic equation, again laying aside any assumptions about the state of the economy, the factors most likely to influence the demand for new passenger automobiles include: (1) the perceived need for personal transportation vs. mass transportation, (2) the need for passenger automobiles due to increased scrappage (obsolescence, etc.), (3) personal incomes, (4) the costs of purchasing and operating an automobile, (5) demographic factors (size of families and number of licensed drivers, etc.), and (6) consumer preferences regarding appearance, style, and technology.

Competing influences may confound the projected outcome of any of the above six factors relevant to their individual effect upon the demand for new passenger automobiles. While increased fuel-efficiency in an automobile would most likely increase the demand for such a vehicle (assuming gasoline and other directly related operating costs will increase over time) consumer perception may conflict if the materials and technology utilized to achieve the required average fuel economy standards are not in concert with consumer preferences.

Historically, the perceived need for personal travel might best be assessed in terms of vehicle miles traveled during each year, as shown below. The energy crisis and nationally enforced speed limits of 55 miles per hour generally discouraged the vehicle miles traveled during 1974 and marked the nation's first decline in year-to-year

vehicle miles traveled since World War II. Thereafter, however vehicle miles traveled during 1975 and 1976 registered increases of 3.3 and 4.1 percent, respectively.

Passenger automobiles: Vehicle miles traveled per year, 1971-76

Year	Quantity	Percentage increase (+) or decrease (-)
	Billion miles	
1971	939.1	+5.4
1972	986.4	+5.0
1973	1,016.9	+3.1
1974	995.5	-2.1
1975	1,028.1	+3.3
1976	1,070.0	+4.1

Source: U.S. Federal Highway Administration, Highway Statistics, Annual and Traffic Volume Trends, various issues.

Another variable influencing the demand for new passenger automobiles is the rate of scrappage and/or general obsolesence of older automobiles. Obviously an eventual replacement is necessary for each automobile that is retired from the existing stock of passenger automobiles in the United States. The replacement, or new passenger automobile, may be domestic or foreign in origin. As indicated below, scrappage as a percent of new passenger cars registered has ranged between 68 and 72 percent since 1970. Thus, while the total stock of U.S. passenger automobiles is eventually replenished through the production of new automobiles, the overall stock grows by only about 30.0 percent of each year's new passenger registrations, due to the retirement of older automobiles.

Passenger automobiles: Scrappage as a percentage of new passenger automobiles registered during the period June 30 of the preceding year and July 1 of the following year, 1971-75

(In percent)

Item	1971	1972	1973	1974	1975	5 year average
Scrappage as a percentage of new passenger automobiles registered	69.3	70.4	72.0	68.3	72.3	70.5

Source: Automotive News, 1977 Market Data Book Issue.

Personal income as a variable influencing the demand for new passenger automobiles has two observable effects upon sales: (1) as income increases relative to prices of new passenger automobiles, the share of larger-size automobiles tends to increase relative to the share held by smaller size automobiles, and (2) as income reaches $15,000 or more per family (in 1970 constant dollars) the share of larger size automobiles declines relative to smaller size automobiles as two-car families become prominent (adding a smaller automobile as a second means of transportation) while also increasing the number of more luxuriously appointed automobiles, large and small.

The initial purchase price and later the operating expenses associated with automobile ownership are other important variables influencing the demand for new passenger automobiles in the United States. Generally, as automobile prices and expenses increase relative to personal disposable income, demand shifts among classes

of passenger automobiles with consumers favoring those classes that are less expensive to purchase and operate.

Demographic factors also play an important role as a determinant of demand for passenger automobiles, new and used. In general, the demand for passenger automobiles is enhanced with a growing population. The larger a family of licensed drivers, the more likely is increased demand for a passenger automobile; the higher the family income the greater the likelihood that a new (or used) automobile will be purchased.

Consumer preference could be the single most important factor affecting the demand for passenger automobiles in the United States. They are treated in detail in the later section of this report on Consumer Impact.

U.S. Passenger Automobiles in Use and Registrations/(sales)

The number of passenger automobiles in use, or yearend stock (the total number of passenger automobiles in use at yearend, domestic and imported, new and used), rose every year during the 1972-76 period. The increase, as shown in the following table, averaged about 2.9 million units per year, while the rate of increase for the 5-year period averaged about 3.1 percent a year.

Passenger automobiles: Actual yearend stock of passenger automobiles, 1972-76

(In millions of units)

Year	Actual U.S. yearend stock
1972	86.4
1973	89.8
1974	92.6
1975	95.2
1976	97.8

Source: Automotive News.

The following table shows actual U.S. consumption of new passenger automobiles for the 1970-76 period. Total consumption increased each year during the 1970-73 period, but because of previously discussed economic and related factors, fell almost 2.3 million units or about 20.0 percent in 1974. As can be seen from the table, U.S. consumption had not recovered to the 1973 level by the end of 1976. With the exception of 1970 and 1975, imports from Canada and all other countries have been fairly constant, averaging about 2.4 million units per year.

New passenger automobiles: U.S. factory sales, imports for consumption, exports of domestic passenger automobiles, and apparent consumption, 1970-76

(In thousands of units)

Year	U.S. factory sales	Imports 1/	Exports	Apparent consumption
1970	6,547	2,013	285	8,275
1971	8,585	2,587	387	10,785
1972	8,824	2,486	411	10,899
1973	9,658	2,437	509	11,586
1974	7,311	2,572	601	9,282
1975	6,713	2,075	642	8,146
1976	8,498	2,537	681	10,354

1/ Includes imports from Canada and all other countries.

Source: U.S. factory sales compiled from data published by the Motor Vehicle Manufacturers Association, Inc; all other data compiled from official statistics of the U.S. Department of Commerce.

New passenger automobiles are classified by size or type; the standard classifications presently in use are subcompact, compact, mid-size, full-size, and luxury. During the 1972-76 period, almost 90 percent of all imported new passenger automobiles fell under the subcompact classification, while the remaining 10 percent was almost evenly divided between compact and luxury automobiles.

U.S./Canadian-produced automobiles, as shown in the following table, have exhibited a pattern quite different from imports. Subcompact sales remained fairly constant over the 1972-76 period, ranging from a low of 9.3 percent of the market in 1972 to a high of 11.6 percent in 1976. Jointly, compact and mid-size automobiles, on the other hand, increased their share of the market during the 1972-76

period from 39.7 percent in 1972 to 61.4 percent in 1976. This increase was primarily at the expense of the full-size automobile; the full-size share dropped from 45.7 percent in 1972 to 22.1 percent in 1976. In terms of market share, sales of luxury models tended to remain almost the same due to the introduction of a few smaller size automobiles in that class during the period. Even though these newer models were smaller, they were classified as luxury models because this class is based primarily upon manufacturer's suggested price, not necessarily size.

New passenger automobiles: Total sales of U.S./Canadian assembled automobiles and their share of total sales, by types, 1972-76 1/

Year	Total sales of U.S./Canadian assembled automobiles	Sub-compact	Compact	Mid-size	Full-size	Luxury
	1,000 units	Percent	Percent	Percent	Percent	Percent
1972	9,322	9.31	17.90	21.77	45.68	5.34
1973	9,670	11.09	21.43	27.62	35.22	4.64
1974	7,449	10.63	29.06	29.03	26.54	4.74
1975	7,050	9.93	33.13	29.57	21.95	5.42
1976	8,607	11.61	28.31	33.06	22.06	4.96

1/ Size classifications are based on standards used by Automotive News.

Source: Automotive News.

During the 1972-76 period, registrations of U.S./Canadian-produced automobiles reached a peak in 1973 when 9.6 million U.S./Canadian new passenger automobiles were registered in the United States. These automobiles held the highest percentage of total U.S. registrations in

1972 when they comprised 85.4 percent of the total U.S. registrations, while 1975 marked the lowest share for U.S./Canadian registrations when they held only 81.8 percent of the market. As the following table shows, U.S./Canadian automobile registrations comprised about 85 percent of the total except for 1975 when domestic registrations decreased sharply from the preceding year and import registrations remained almost constant.

New passenger automobiles: U.S. registrations, domestic and total, 1972-76

Year	Domestic 1/ registrations	Total U.S. registrations	Domestic registrations as a share of total U.S. registrations
	1,000 units	1,000 units	Percent
1972	8,958	10,487	85.4
1973	9,631	11,351	84.8
1974	7,331	8,701	84.3
1975	6,761	8,262	81.8
1976	8,305	9,752	85.1

1/ Domestic registrations include passenger automobiles assembled in the United States and those assembled in Canada and imported into the United States under the Automotive Products Trade Act.

Source: Automotive News.

U.S. Imports

Imported automobiles first became a factor in the U.S. market in 1948 when 16,133 foreign automobiles (mostly Volkswagens from West Germany and MG's from England) were registered for use in the United States. The first year that 1 million imports were registered was 1969, while the greatest number of registrations was recorded in 1973, when there were 1.7 million. The following table lists the total number of imported automobile registrations for each year for the period 1969-76.

New passenger U.S. automobiles: Import registrations and their share of total U.S. registrations, 1969-76

Year	U.S. registrations of imports 1/	Registrations of imports as a percent of total U.S. registrations
	1,000 units	Percent
1969	1,060	11.2
1970	1,231	14.7
1971	1,465	14.9
1972	1,529	14.6
1973	1,720	15.2
1974	1,369	15.7
1975	1,501	18.2
1976	1,447	14.9

1/ Does not include new passenger automobiles imported from Canada.

Source: Automotive News.

As can also be seen in the preceding table, the share of the U.S. automobile market held by imported automobiles has averaged about 14.9 percent since 1969, ranging from a low of 11.2 percent in 1969

to a high of 18.2 in 1975. With the exception of 1975, the import share of the U.S. automobile market has been relatively stable since 1970. The high share of 18.2 percent for 1975 was the result of a relatively small increase in registrations of imported automobiles while domestic registrations declined sharply.

Canada

Imports of new passenger automobiles from Canada during 1972-76 averaged about 8.5 percent of the total new passenger automobiles registered in the United States. As the following table shows, 1973 marked the peak year, in terms of units, for Canadian automobile imports into the United States for the 1972-76 period, while it marked the lowest year, on a percentage basis, for the same period.

New passenger automobiles: Imports from Canada and their share of total U.S. registrations, 1972-76

Year	Imports from Canada	Imports from Canada as a share of total U.S. registrations
	Units	Percent
1972	842,300	8.0
1973	871,557	7.7
1974	817,559	9.4
1975	733,766	8.9
1976	825,590	8.5

Source: Compiled from official statistics of the U.S. Department of Commerce and Automotive News.

Japan

In terms of retail sales, new passenger automobiles from Japan during 1972-76 averaged about 7.5 percent of the total U.S. market. The following table shows that imported automobiles from Japan have steadily gained a larger share of the total U.S. market in terms of unit sales since 1972. The lowest market share of Japanese imports, 5.7 percent, was recorded at the beginning of the 1972-76 period, while the highest share, 9.3 percent, was reached during the last 2 years of this period. Actual unit sales have increased every year since 1972, with the exception of 1974 when the automobile industry experienced an exceptionally poor year because of the oil embargo, a general worldwide recession, and large price increases of new automobiles.

New passenger automobiles: Sales of imports from Japan and their share of total U.S. sales, 1972-76

Year	Sales of imports from Japan	Japanese imports as a share of total U.S. sales
	Units	Percent
1972	625,085	5.7
1973	756,077	6.6
1974	597,375	6.7
1975	806,778	9.3
1976	937,661	9.3

Source: Automotive News and Wards.

All other countries

Retail sales for imported automobiles originating from all countries except Canada and Japan (primarily England, Italy, Belgium, France, West Germany, and Sweden) averaged about 9 percent of the total U.S. market from 1972 to 1975, then dropped to 5.5 percent in 1976. New passenger automobiles imported into the U.S. from the preceding countries are generally categorized as luxury-type automobiles or as compacts and subcompacts. In most instances, automobiles imported from these countries do not compete to a significant degree in the U.S. market place within the mid-size or full-size automobile segments. This relationship holds true of each of the following three scenarios detailed later in this report. During this 5-year period, the highest year for sales, in units, was 1973, when approximately 1 million units were sold in the United States while the lowest year for sales was 1976, when 0.5 million were sold. The following table shows the number of units sold for 1972-76 and the imports from these countries as a share of total U.S. sales.

New passenger automobiles: Sales of imports from all countries except Japan and Canada and their share of total U.S. sales, 1972-76

(Quantity in units)

Year	Sales of imports from all countries except Japan and Canada	Imports from all countries except Japan and Canada as a share of total U.S. sales
	Units	Percent
1972	972,363	8.9
1973	1,004,333	8.8
1974	805,660	9.1
1975	762,433	8.9
1976	554,249	5.5

Source: Automotive News and Wards.

U.S. Employment

As shown in the following table, average annual employment of all employees in establishments primarily engaged in manufacturing motor vehicles, passenger car bodies, truck and bus bodies, motor vehicle parts and accessories, and truck trailers during the 1971-76 period ranged from a high of 955,300 employees in 1973 to a low of 774,100 employees in 1975. For production and related workers, shown separately, the peak year was also 1973, when the average annual employment reached 743,400 thousand, while the lowest year was 1975. Separate official data are not available concerning average annual employment for new passenger automobiles.

Average annual employment in the U.S. motor-vehicle industry, all employees and production and related employees, 1971-76

(In thousands of employees)

Year	All employees	Production and related employees only
1971	842.6	651.3
1972	862.8	668.6
1973	955.3	743.4
1974	890.8	682.3
1975	774.1	593.4
1976	850.6	661.8

Source: U.S. Department of Labor, Bureau of Labor Statistics.

The best sales year the domestic automobile manufacturers experienced was 1973, when sales reached over 9.6 million units. Because of various adverse conditions which affected the automobile

industry and the U.S. economy, unit sales declined to 7 million in 1975 and increased to 8.6 million in 1976. Employment of automotive employees is directly related to unit sales, and the figures in the preceding table clearly reflect this linkage; average annual employment in the U.S. motor-vehicle industry reached a peak of 955,000 employees in 1973, and by 1976 had returned to an average of only 850,000.

THE FUTURE OF THE U.S. PASSENGER AUTOMOBILE INDUSTRY

The Base Case

Economic and other assumptions

For purposes of this report, the Base Case is assumed to be a hypothetical scenario projecting the future of the U.S. automobile industry and the market during the 1977-85 period under all currently existing laws and regulations (as outlined in earlier sections). Projections are made with respect to U.S. passenger automobiles in use, U.S. registrations of new passenger automobiles, U.S. imports and U.S. employment. A separate analysis entitled Consumer Impact details consumer preferences and prices of new passenger automobiles.

Economic assumptions underlying the Base Case projections (and subsequent hypothetical scenarios described later in this report) are as follows:

General Economic Assumptions

Unless otherwise indicated, a period of relatively stable economic growth between 1977-85 was assumed. The following guidelines were used (in percent):

	Average annual growth rates		
	1977-80	1980-85	1977-85
GNP (real)	3.5	3.3	3.4
Disposable personal income (real)	3.8	3.4	3.6
Inflation	5.0	4.0	4.5
Price of gasoline	10.0	10.0	10.0
Unemployment	falling toward 4.5 percent by 1985		

In addition, for purposes of our projections, it is also assumed that the domestic automobile industry will be comprised of four major manufacturers--GM, Ford, Chrysler, and American Motors--during the 1977-85 period. Volkswagen and Volvo (assuming Volvo begins U.S. production) will likely be too small to be considered major manufacturers by 1985.

U.S. passenger automobiles in use and registrations/(sales).--Given the preceding assumptions about the U.S. regulatory climate and the state of the economy, the number of U.S. passenger automobiles in use, 1/ is projected to increase during 1977-85 from 102.1 to 117.7 million units. As shown in the following table, the U.S. passenger automobile stock is further categorized by type--subcompact, compact, mid-size, full-size, and luxury. Note particularly that the full-size automobile is projected to decline from about 30 percent of the U.S. stock to slightly less than 24 percent during

Passenger automobiles: Actual U.S. yearend stock of passenger automobiles and their share of total stock, by types, under the Base Case, estimated for 1977-85

Year	Base Case					
	Actual U.S. yearend stock	Subcompact	Compact	Mid-size	Full-size	Luxury
	Million units	Percent	Percent	Percent	Percent	Percent
1977	102.1	19.0	17.9	24.0	30.1	9.0
1978	105.0	19.8	17.9	24.4	28.8	9.0
1979	107.1	20.4	18.1	24.8	27.6	9.1
1980	108.5	20.8	18.3	25.2	26.5	9.2
1981	109.6	21.0	18.7	25.6	25.5	9.2
1982	110.8	20.9	19.2	25.9	24.7	9.3
1983	112.3	20.7	19.6	26.2	24.1	9.4
1984	114.9	20.3	20.0	26.4	23.8	9.5
1985	117.7	19.8	20.4	26.5	23.7	9.6

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

1/ Previously defined as the total number of passenger automobiles in use at yearend, domestic and imported, new and used; also referred to as actual U.S. yearend stock or stock.

the 1977-85 period while the mid-size and compact automobiles are expected to increase in relative importance.

U.S. registrations (a proxy for retail sales) are projected to reach 11.1 million units in 1978, increase to 12 million units in 1981 and peak at about 14 million units by 1985. Of the total new passenger automobiles registered in the United States, United States/Canadian-type automobiles are expected to maintain a share well above 85 percent of the market.

New passenger automobiles: U.S. registrations, domestic and total, under Existing Laws and Regulations Base Case, estimated for 1977-85

Year	Domestic registrations	Total U.S. registrations	Domestic registration as a share of total U.S. registrations
	1,000 units	1,000 units	Percent
1977	9,410	10,950	85.9
1978	9,580	11,110	86.2
1979	9,900	11,350	87.2
1980	10,340	11,790	87.7
1981	10,620	12,000	88.5
1982	10,810	12,210	88.5
1983	11,130	12,550	88.7
1984	12,100	13,600	89.0
1985	12,490	14,000	89.2

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

The domestic share of total new passenger automobile registrations, by types, is projected below. Since there are virtually no U.S. imports of mid-size and full-size automobiles, the domestic share of U.S. new

passenger automobile registrations is 100 percent for automobiles classified as mid-size and full-size.

New passenger automobiles: U.S. domestic registrations (sales) as a share of total U.S. registrations, by types, under the Base Case, estimated for 1977-85

(In percent)

Year	Subcompacts	Compacts	Luxury
1977	46.0	94.0	90.0
1978	46.0	94.0	90.5
1979	47.0	94.5	91.0
1980	48.0	94.5	91.0
1981	49.0	95.0	91.0
1982	49.0	95.0	91.0
1983	49.0	95.0	91.0
1984	49.0	95.0	91.0
1985	49.0	95.0	91.0

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

As can be seen from the preceding table, domestic new passenger subcompact automobile registrations as a percent of total U.S. registrations are projected to range between 46 and 49 precent during 1977-85. Domestic compact and luxury-type automobiles are projected to be between 90 and 95 percent during the same period.

U.S. imports.--In accordance with the Base Case assumptions, imported new passenger automobiles from all countries, except Canada, will register little growth during the 1978-85 period, with U.S. registrations of imported passenger automobiles fluctuating between 1.4 and 1.5 million units. Imported new passenger automobiles, while fluctuating in terms of units registered, will gradually decline as a percent of overall

U.S. registrations during 1978-85, from 13.8 percent in 1978 to 10.8 percent in 1985.

The anticipated decline in U.S. registrations of imported automobiles during the 1978-85 period is expected to be due to (1) the likelihood that U.S. manufacturers will provide relatively more fuel-efficient new passenger automobiles as part of their product mix than they do today in their attempt to comply with existing fuel efficiency standards, thus becoming more competitive with foreign fuel-efficient automobiles (2) the lack of any additional incentives for the American consumer to purchase a foreign-made fuel-efficient automobile vs a domestically produced one and (3) the assumption that prices of domestically produced automobiles will increase more slowly than prices of imported automobiles.

New passenger automobiles: U.S. registrations of imports (except Canadian) and their share of total U.S. registrations under the Base Case, estimated for 1977-85

Year	U.S. registrations of imports (except Canadian)	U.S. registrations of imports (except Canadian) as a share of total U.S. registrations
	1,000 units	Percent
1977	1,540	14.1
1978	1,530	13.8
1979	1,450	12.8
1980	1,450	12.3
1981	1,380	11.5
1982	1,400	11.5
1983	1,420	11.3
1984	1,500	11.0
1985	1,510	10.8

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

As shown in the following table, new passenger automobiles imported into the United States from all countries, except Canada, also are projected to hold a declining share of total U.S. registration, by types, during the 1977-85 period.

New passenger automobiles: Imports, except Canadian, registered as a share of total U.S. registrations, by types, under Base Case, estimated for 1977-85, under Base Case

(In percent)

Year	Subcompacts	Compacts	Luxury
1977	54.0	6.0	10.0
1978	54.0	6.0	9.5
1979	53.0	5.5	9.0
1980	52.0	5.5	9.0
1981	51.0	5.0	9.0
1982	51.0	5.0	9.0
1983	51.0	5.0	9.0
1984	51.0	5.0	9.0
1985	51.0	5.0	9.0

Source: Estimated by the U.S. International Trade Commission on the basis of upon Wharton EFA Automobile Demand Model forecasts.

Canada.--Imports of new passenger automobiles from Canada during 1977-85 are expected to comprise about 9.5 percent of the U.S./Canadian new passenger automobiles registered in the United States. As a projection, U.S. registrations of Canadian-made new passenger automobiles (a proxy for imports sold) will increase from 894,000 units to 1.2 million units during the 1977-85 period, or from 8.2 percent to 8.5 percent of total U.S. registrations (U.S. registrations of U.S. and Canadian-made automobiles and U.S. registrations of all imported automobiles).

New passenger automobiles: U.S. registrations of U.S.-made and Canadian-made automobiles and Canadian-made as a share of total U.S. registrations estimated for 1977-85, under the Base Case

Year	U.S.-made	Canadian-made	U.S. registrations of Canadian-made automobiles as a percent of total U.S. registrations
	1,000 units	1,000 units	Percent
1977	8,519	894	8.2
1978	8,670	910	8.2
1979	8,961	941	8.3
1980	9,354	982	8.3
1981	9,608	1,009	8.4
1982	9,780	1,027	8.4
1983	10,070	1,057	8.4
1984	10,954	1,150	8.5
1985	11,298	1,187	8.5

Source: Estimated by the U.S. International Trade Commission based upon Wharton EFA Automobile Demand Model forecasts.

Japan.--Under the assumptions previously described for the Base Case, imports from Japan of new passenger automobiles are estimated to comprise about 70 percent of new foreign passenger automobiles (except Canadian) registered in the United States during 1977-85. As shown below, by 1985 total U.S. registrations from Japan would decline slightly below the 1977 level, 1.06 million units versus 1.08 million units, respectively. Under the Base Case, U.S. registrations of new passenger automobiles from Japan are projected to decline from 9.7 percent of total U.S. registrations in 1977 to 7.6 percent in 1985 due to the increased competitiveness of U.S.-made automobiles in the more fuel-efficient categories.

New passenger automobiles: U.S. registrations of imports from Japan and their share of total U.S. registrations under Base Case estimated for 1977-85

Year	U.S. registrations from Japan	U.S. registrations from Japan as a share of total U.S. registrations
	1,000 units	Percent
1977	1,080	9.7
1978	1,070	9.6
1979	1,015	8.9
1980	1,015	8.6
1981	966	8.0
1982	980	8.0
1983	994	7.9
1984	1,050	7.7
1985	1,057	7.6

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

All other countries.--New passenger automobiles from West Germany, Belgium, the United Kingdom, Italy, Sweden, and France, will comprise an estimated 30 percent of the foreign new passenger automobile registrations (except Canadian) in the United States during 1977-85. As indicated in the following table, U.S. registrations of new passenger automobiles, under the Base Case, are projected to fluctuate downward during 1977-85 from 462,000 in 1977 to 453,000 in 1985. Imports from the aforementioned countries will decline in relative importance between 1977-85, as their percentage of total U.S. new passenger automobile registrations declines from 4.2 percent to 3.2 percent.

New passenger automobiles: U.S. registrations of imports from all other countries 1/ and their share of total U.S. registrations, under the Base Case, estimated for 1977-85

Year	U.S. registration from all other countries 1/	U.S. registration from all other countries as a share of total U.S. registrations
	1,000 units	Percent
1977	462	4.2
1978	459	4.1
1979	435	3.8
1980	435	3.7
1981	414	3.6
1982	420	3.5
1983	426	3.4
1984	450	3.3
1985	453	3.2

1/ Essentially, West Germany, Belgium, the United Kingdom, Italy, Sweden, and France.

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

Employment.--Responses of the four major domestic automobile manufacturers to questionnaires of the U.S. International Trade Commission indicate that average annual employment in passenger automobile production 1/ of the four manufacturers was 796,019 in 1974, 722,172 in 1975, and 808,802 in 1976. Employment projections to 1985 were made by the United States International Trade Commission by applying the 1976 ratio of registrations of new U.S.-made automobiles per employee (approximately 10.5: 1) to projected 1977-85 Base Case automobile registrations of U.S.-made automobiles. This, of course, does not consider the possible increases or declines in annual output per employee. The results are shown in the table below.

Average annual employment 1/ in the domestic automobile industry, Base Case, 1977-85

(In thousands of employees)

Year	Employment
1977	811
1978	826
1979	853
1980	891
1981	915
1982	931
1983	959
1984	1,043
1985	1,076

1/ Employment at U.S. facilities in which complete passenger automobiles and automotive parts are produced. This does not include employment associated with the production and/or assembly of light trucks and parts for such vehicles.

Source: U.S. International Trade Commission.

1/ Employment at U.S. facilities in which complete passenger automobiles and automotive parts are produced. Manufacturers were asked not to include employment associated with the production and/or assembly of light trucks and parts for such vehicles; however, one manufacturer did include such employment, thus slightly overstating the aggregate figures shown above.

The Base Case Versus the FIT/FER Proposal

Additional assumptions

An assessment of the President's Fuel Inefficiency Tax (FIT) and Fuel Efficiency Rebate (FER) proposal, (the FIT/FER proposal) and its likely impact upon the future of the U.S. automobile industry is projected by the Commission on the basis of the previously stated economic and industry assumptions outlined under the Base case. It is further predicated upon the assumption that the tax and rebate system proposed by the President under section 1201 of the National Energy Act would be applied on a like basis to both domestically produced and imported new passenger automobiles sold in the United States during the 1978-85 period.

U.S. passenger automobiles in use and registrations/(sales).--Given the collateral assumptions for the President's FIT/FER proposal, the number of U.S. passenger automobiles in use 1/ is expected to increase by less than one-half of one percent above the levels projected under the Base Case (without the President's FIT/FER proposal) during the 1977-85 period (see pages E-2 and E-3 in the appendix).

While the overall U.S. stock of passenger automobiles during 1978-85 is almost identical under the Base Case and the FIT/FER proposal, the composition of the automobile stock, by types, does change. Specifically, the share held by the full-size automobile declines significantly below Base Case levels for 1985, dropping to 19.8 percent of the total stock in that year in contrast to a share of 23.7 percent held under the Base Case. In fact, during each of the years 1978-85, the full-size automobile is projected to decline in its percentage share of the overall stock because of the FIT/FER proposal (the anticipated higher prices as a result of the proposed tax would dampen consumer demand for the full-size automobile while the proposed rebate would encourge the consumption of smaller more full-efficient automobiles). In contrast, the subcompact automobile would likely increase its share of the overall automobile stock by 1985, increasing its share to 23.5 percent of the total stock versus 19.8 percent under the Base Case. The compact, mid-size, and luxury

1/ Previously defined as the total number of passenger automobiles in use at yearend, domestic and imported, new and used; also referred to as actual U.S. year-end stock or stock.

automobiles are projected to remain virtually unchanged during the 1978-85 period (see table below).

Passenger automobiles: Actual U.S. yearend stock of passenger automobiles, domestic and imported, and their shares of total stock, by types, under the FIT/FER proposal and Base Case, estimated for 1977-85

(In percent)

Automobile type	1977	1978	1979	1980	1981	1982	1983	1984	1985
Subcompact:									
With FIT/FER proposal	19.0	20.6	21.8	22.7	23.2	23.6	23.7	23.7	23.5
Base Case	19.0	19.8	20.4	20.8	21.0	20.9	20.7	20.3	19.8
Difference	0	0.8	1.4	1.9	2.2	2.7	3.0	3.4	3.7
Compact:									
With FIT/FER proposal	17.9	17.8	17.8	18.0	18.4	18.8	19.3	19.7	20.1
Base Case	17.9	17.9	18.1	18.3	18.7	19.2	19.6	20.0	20.4
Difference	0	-.1	-.3	-.3	-.3	-.4	-.3	-.3	-.2
Mid-size:									
With FIT/FER proposal	24.0	24.5	25.0	25.4	25.9	26.3	26.6	26.9	27.0
Base Case	24.0	24.4	24.8	25.2	25.6	25.9	26.2	26.4	26.5
Difference	0	.1	.2	.2	.3	.4	.4	.5	.5
Full size:									
With FIT/FER proposal	30.1	28.1	26.4	24.8	23.3	22.0	21.0	20.3	19.8
Base Case	30.1	28.8	27.6	26.5	25.5	24.7	24.1	23.8	23.7
Difference	0	-.7	-1.2	-1.7	-2.2	-2.7	-3.1	-3.5	-3.9
Luxury:									
With FIT/FER proposal	9.0	9.0	9.1	9.1	9.2	9.3	9.3	9.4	9.6
Base Case	9.0	9.0	9.1	9.2	9.2	9.3	9.4	9.5	9.6
Difference	0	0	0	-.1	0	0	-.1	-.1	0

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

Total U.S. registrations, with the FIT/FER proposal, are projected to reach levels somewhat above those projected under the Base Case during 1978-80; however, for the period 1981-85, U.S. new passenger automobile registrations are generally expected to drop below levels projected under the Base Case since the FIT/FER proposal would encourage the sale of the more fuel efficient automobiles while discouraging the sale of the less fuel efficient passenger automobiles. It is also likely that consumers will postpone purchases of new automobiles under the FIT/FER proposal (1) to avoid the tax to be assessed on larger automobiles and (2) because of the higher expected prices of used automobiles more consumers will tend to repair their automobiles effectively postponing new purchases. 1/ In contrast, as shown below, new passenger automobiles of the U.S./Canadian type registered in the U.S. under the FIT/FER proposal are expected to decline below levels projected under the Base Case during each of the years, 1978-85, with imported new passenger automobiles gaining a larger share of the U.S. market. Detailed discussion and projections with respect to the share expected to be held by imported new passenger automobiles in the United States during the 1978-85 period are addressed later in this report under the section on U.S. imports.

1/ It is reasoned that as new passenger automobiles increase in price (with the added fuel inefficiency tax) older automobiles will have a higher value and the average consumer could more easily justify increased operating expenses and costs of repairs, etc.

New passenger automobiles: U.S. registrations, domestic 1/ and total, under the FIT/FER proposal and under the Base Case, estimated for 1977-85

Year	Domestic registrations 1/			Total U.S. registrations			Domestic registrations as a share of total U.S. registrations		
	FIT/FER	Base case	Difference	FIT/FER	Base case	Difference	FIT/FER	Base case	Difference
	1,000 units	1,000 units	1,000 units	1,000 units	1,000 units	1,000 units	Percent	Percent	Percent
1977	9,410	9,410	0	10,950	10,950	0	85.9	85.9	0
1978	9,380	9,580	-200	11,360	11,110	250	82.6	86.2	-3.6
1979	9,570	9,900	-330	11,370	11,350	20	84.2	87.2	-3.0
1980	10,120	10,340	-220	11,850	11,790	60	85.4	87.7	-2.3
1981	10,330	10,620	-290	11,950	12,000	-50	86.5	88.5	-2.0
1982	10,560	10,810	-250	12,250	12,210	40	86.2	88.5	-2.3
1983	10,800	11,130	-330	12,470	12,550	-80	86.6	88.7	-2.1
1984	11,730	12,100	-370	13,540	13,600	-60	86.6	89.0	-2.4
1985	12,160	12,490	-330	13,970	14,000	-30	87.0	89.2	-2.2

1/ Includes new passenger automobiles from Canada.

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

The domestic (U.S./Canadian) share of total new passenger automobile registrations, by types, is projected to remain the same under the FIT/FER proposal as that projected under the Base Case presented earlier in this report. Accordingly, U.S. registrations of domestic new passenger automobiles as a percent of total U.S. registrations are expected to be 100 percent for mid-size and full-size automobiles and range to between 46 and 49 percent for subcompacts and between 90 and 95 percent for compact and luxury-type automobiles (see previous table on page 77).

It does appear, however, that overall reductions in registrations are expected to a large degree within the full-size segment, and to a lesser extent within the compact and luxury segments. This accounts for the overall losses suffered by domestic registrations between the Base Case and the FIT/FER proposal. For example, in 1978, domestic registrations of new passenger automobiles are projected to decline by approximately 200,000 units. The bulk of this domestic loss would be due to the general decline in sales of full-size automobiles under the FIT/FER proposal, a decline from 23.7 percent of total U.S. registrations to 17.5 percent, or about 645,000 full-size automobiles. A corresponding loss of 140,000 compact automobiles with a gain of 194,000 mid-size, 388,000 subcompacts, and about 2,000 luxury automobiles, yield a net domestic loss of approximately 200,000 units. The overall shares of new U.S. registrations under the FIT/FER proposal and the Base Case are shown in the following table.

New passenger automobiles: Share of total U.S. registrations, by types, under the FIT/FER proposal and the Base Case, estimated for 1977-85

(In percent)

Year	Subcompact		Compact		Mid-size		Full-size		Luxury	
	FIT/FER	Base Case	FIT/FER	Base Case	FIT/FER	Base Case	FIT/FER	Base Case	FIT/FER	Base Case
1977----	22.3	22.3	18.3	18.3	28.1	28.1	22.2	22.2	9.2	9.2
1978----	28.9	22.0	15.9	17.6	28.7	27.6	17.5	23.7	9.0	9.2
1979----	26.5	20.6	17.3	18.6	27.9	27.0	19.2	24.6	9.1	9.3
1980----	24.4	19.9	19.5	19.8	27.7	27.0	19.1	23.9	9.3	9.4
1981----	22.7	18.8	21.8	21.5	27.6	27.0	18.4	23.0	9.5	9.6
1982----	23.4	18.7	21.3	21.8	27.2	26.7	18.4	23.0	9.7	9.8
1983----	22.3	18.2	22.3	22.1	27.0	26.5	18.7	23.3	9.8	9.9
1984----	22.3	17.6	22.1	22.0	27.1	26.3	18.5	24.0	10.0	10.1
1985----	21.5	17.2	22.2	22.0	26.6	26.2	19.5	24.3	10.2	10.3

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

U.S. imports.--U.S. imports of new passenger automobiles from all countries (except Canada) under the FIT/FER proposal are projected to reach levels above those projected under the Base Case. In fact, U.S. registrations of imported new passenger automobiles are expected to exceed Base Case levels by 237,000 to nearly 450,000 units during the 1978-85 period. U.S. registrations of imports from all countries (except Canada) as a percent of total U.S. registrations are projected to decline in overall importance, however, from 17.4 to 13.0 percent.

New passenger automobiles: U.S. registrations of imports (except Canada) and their share of total U.S. registrations under the FIT/FER proposal and under the Base Case, estimated for 1977-85

Year	U.S. registrations of imports (except Canada)			U.S. registrations of imports (except Canada) as a share of total U.S. registrations		
	FIT/FER	Base Case	Difference	FIT/FER	Base Case	Difference
	1,000 units	1,000 units	1,000 units	Percent	Percent	Percent
1977	1,540	1,540	0	14.1	14.1	0
1978	1,976	1,530	446	17.4	13.8	-3.6
1979	1,796	1,450	346	15.8	12.8	-3.0
1980	1,730	1,450	280	14.6	12.3	-2.3
1981	1,617	1,380	237	13.5	11.5	-2.0
1982	1,697	1,400	297	13.8	11.5	-2.3
1983	1,665	1,420	245	13.4	11.3	-2.1
1984	1,813	1,500	313	13.4	11.0	-2.4
1985	1,814	1,510	304	13.0	10.8	-2.2

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

As a consequence of the projection that product mix (domestic versus imported new passenger automobile registrations by types) is expected to remain the same under the FIT/FER proposal as under the Base Case, imported new passenger automobiles registered in the U.S. will continue to dominate the subcompact class (accounting for between 51 and 54 percent of total U.S. registrations) and will comprise about 5 to 6 percent of the compact automobiles registered during the 1977-85 period and about 9 to 10 percent of the luxury automobiles registered (see previous table on page 80). This result, coupled with the projected share of new registrations presented in the tabulation on page 90 accounts for the overall increase in import registrations, with imports gaining (or losing less than domestics) in sales of subcompacts, compacts, and luxury-type automobiles. Any loss in sales of full-size or medium-size automobiles (projected in the table on page 90) will be at the direct expense of domestic manufacturers since 100 percent of these two classes of automobiles are produced for sale in the United States by GM, Ford, Chrysler, and AMC.

Canada.--Imports of new passenger automobiles from Canada during 1977-85 are expected to continue to comprise about 9.5 percent of the U.S./Canadian new passenger automobiles registered in the United States under the FIT/FER proposal. As shown in the following table, U.S. registrations of Canadian-made new passenger automobiles are projected to be at levels less than those prevailing under the Base Case. This decline in U.S. registrations

of Canadian-made automobiles is in concert with the overall projected decline in total U.S./Canadian registrations under the FIT/FER proposal.

New passenger automobiles: U.S. registrations of U.S.-made and Canadian-made automobiles, and Canadian-made as a share of total U.S. registrations under the FIT/FER proposal and under the Base Case, estimated for 1977-85

Year	U.S.-made			Canadian-made			U.S. registrations of Canadian-made automobiles as a share of total U.S. registrations		
	FIT/FER	Base Case	Difference	FIT/FER	Base Case	Difference	FIT/FER	Base Case	Difference
	1,000 units	1,000 units	1,000 units	1,000 units	1,000 units	1,000 units	Percent	Percent	Percent
1977	8,516	8,519	-3	894	894	0	8.2	8.2	0
1978	8,489	8,670	-181	891	910	19	7.8	8.2	-.4
1979	8,661	8,961	-300	909	941	-32	8.0	8.3	-.3
1980	9,159	9,354	-195	961	982	-21	8.1	8.3	-.2
1981	9,349	9,608	-259	981	1,009	-28	8.2	8.4	-.2
1982	9,557	9,780	-223	1,003	1,027	-24	8.2	8.4	-.2
1983	9,774	10,070	-296	1,026	1,057	-31	8.2	8.4	-.2
1984	10,616	10,954	-338	1,114	1,150	-36	8.2	8.5	-.3
1985	11,005	11,298	-293	1,155	1,187	-32	8.3	8.5	-.2

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

Japan.--Under the Base Case, U.S. imports of new passenger automobiles from Japan were expected to comprise about 70 percent of the total new foreign passenger automobiles registered in the United States; under the FIT/FER proposal such imports from Japan are estimated to comprise approximately 75 percent of total foreign U.S. registrations since overall U.S. demand for foreign-made automobiles is up substantially under the FIT/FER proposal, especially in the class of automobiles, the subcompact, in which Japan has historically been dominant.

As shown in the following tabulation, for the 1977-85 period, U.S. registrations from Japan under the FIT/FER proposal are projected to rise above the levels shown for the Base Case, by between roughly 250,000 and 400,000 units. However, the import impetus fostered under the FIT/FER proposal is expected to lessen over the 1978-85 period with U.S. registrations of Japanese new passenger automobiles declining in terms of total U.S. registrations from 1978's peak of 15.8 percent to 1985's projected 11.2 percent since demand for the subcompact automobile will generally decline in relative importance while demand for the mid-size automobile will increase (see share projections in table on page 91). Essentially, U.S. consumers will tend to purchase somewhat larger-sized automobiles over time, prefering more interior space at the sacrifice of some fuel economy (yielded by subcompacts, etc).

New passenger automobiles: U.S. registrations of imports from Japan and their share of total U.S. registrations under the FIT/FER proposal and under the Base Case, estimated for 1977-85

Year	U.S. registrations from Japan			U.S. registrations from Japan as a share of total U.S. registrations		
	FIT/FER	Base Case	Difference	FIT/FER	Base Case	Difference
	1,000 units	1,000 units	1,000 units	Percent	Percent	Percent
1977	1,080	1,080	0	9.7	9.7	0
1978	1,482	1,070	412	15.8	9.6	6.2
1979	1,347	1,015	332	14.1	8.9	5.2
1980	1,298	1,015	283	12.8	8.6	4.2
1981	1,213	966	247	11.7	8.0	3.7
1982	1,273	980	293	12.0	8.0	4.0
1983	1,249	994	255	11.6	7.9	3.7
1984	1,360	1,050	310	11.6	7.7	3.9
1985	1,361	1,057	304	11.2	7.6	3.6

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

All other countries.--As a direct result of increased U.S. demand for Japanese-made automobiles under the FIT/FER proposal, the share of U.S. registrations of new passenger automobiles from all other countries will decline below the Base Case level of 30 percent. Under the FIT/FER proposal, new passenger automobiles from West Germany, Belgium, the United Kingdom, Italy, Sweden, and France are expected to comprise approximately 25 percent of the new foreign passenger automobiles registered in the United States during 1978-85. As shown below, U.S. imported new passenger automobile registrations from all other countries (except Canada and Japan) are projected to fluctuate above and below Base Case levels during 1978-85 by negligible amounts.

New passenger automobiles: U.S. registrations of imports from all other countries 1/ and their share of total U.S. registrations under the FIT/FER proposal and under the Base Case, estimated for 1977-85

Year	U.S. registrations from all other countries 1/			U.S. registrations from all other countries as a share of total U.S. registrations		
	FIT/FER	Base Case	Difference	FIT/FER	Base Case	Difference
	1,000 units	1,000 units	1,000 units	Percent	Percent	Percent
1977	462	462	0	4.2	4.2	0
1978	494	459	35	4.3	4.1	.2
1979	449	435	14	3.9	3.8	.1
1980	432	435	- 3	3.6	3.7	-.1
1981	404	414	-10	3.4	3.6	-.2
1982	424	420	4	3.5	3.5	0
1983	416	426	-10	3.3	3.4	-.1
1984	453	450	3	3.3	3.3	0
1985	453	453	0	3.2	3.2	0

1/Essentially, West Germany, Belgium, the United Kingdom, Italy, Sweden, and France.

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

Employment.--Implementation of the FIT/FER proposal will result in some employment losses (compared to the Base Case) in the domestic passenger automobile industry, as shown in the table below.

Employment: Average annual employment in the domestic passenger automobile industry under the FIT/FER proposal and under the Base Case, 1977-85

Year	Base Case employment	FIT/FER employment	Employment losses under the FIT/FER proposal 1/	Percent of Base Case employment lost under the FIT/FER
	Thousands	Thousands	Thousands	Percent
1977	811	811	2/	3/
1978	826	812	14	1.7
1979	853	830	23	2.7
1980	891	876	15	1.7
1981	915	895	20	2.2
1982	931	914	17	1.8
1983	959	936	23	2.4
1984	1,043	1,017	26	2.5
1985	1,076	1,053	23	2.1

1/ In determining employment losses under the FIT/FER proposal and under the FIT proposal, it was assumed that the ratio of lost sales of domestically produced automobiles to lost employment is 13:1. The choice of the 13:1 ratio was determined by responses to questionnaires of the U.S. International Trade Commission (which showed approximately a 15:1 ratio) and by previous studies of the Bureau of Labor Statistics, Ford Motor Company, and Dr. Wassily Leontief, which showed ratios of 13:1, 12:1, and 11:1, respectively. The 13:1 ratio is believed to be the most appropriate for the purposes of this study. This 13:1 ratio is preferable to the Base Case sales/employment ratio of 10.5:1 because during periods of sales losses (which will indeed occur under the FIT/FER proposal or the FIT proposal), employees are laid off more slowly than would be the case under a 10.5:1 ratio, since managerial employees are not laid off to the extent that production workers are laid off.

2/ Less than 300 employees.

3/ Less than .03 percent.

Source: U.S. International Trade Commission.

The FIT/FER proposal will have no significant adverse effect on employment in the domestic passenger automobile industry in 1977. During the 1978-85 period, the FIT/FER proposal will cause employment losses (compared to the Base Case) in the industry ranging from a low of 14,000 employees in 1978 to a high of 26,000 employees in 1984. The average employment loss (compared to the Base Case) would be 18,000 employees; the average employment loss as a percentage of Base Case employment would be 1.9 percent.

The Base Case Versus the FIT Proposal

Additional assumptions

The assessment of a modified version of the President's National Energy Act proposal utilizing the Fuel Inefficiency Tax system only (FIT proposal) was undertaken by the Commission based upon the President's tax system as originally outlined in section 1201 of the National Energy Act (except for the system of Fuel Efficiency Rebates). No additional assumptions were made other than those already posited under the Base Case.

U.S. passenger automobiles in use/registrations (sales).-- With the preceding assumptions for the Fuel Inefficiency Tax only proposal, the number of U.S. passenger automobiles in use 1/ during 1978-85, is projected to decline below levels achieved under the Base Case (see pages F-2 and F-3 in the appendix). Under the FIT/FER proposal, the U.S. yearend stock of passenger automobiles increased minimally above Base Case levels.

The overall U.S. stock of passenger automobiles is nearly identical under the Base Case and the FIT proposal with some minor differences in composition by types of automobile, subcompact, compact, mid-size, full-size, and luxury. Under the FIT proposal only the full-size and luxury-type automobiles are projected to show declining shares because of the increased purchase price (with the

1/ Previously defined as the total number of passenger automobiles in use at yearend, domestic and imported, new and used; also referred to as actual U.S. year-end stock or stock.

proposed tax) while the subcompact, compact and mid-size automobiles gain in relative importance--types of automobiles expected to be subject to lesser taxes, if any (see pages F-8 and F-9 in the appendix).

Total U.S. registrations of new passenger automobiles, generally more sensitive to change than the number of passenger automobiles in use, are expected to fluctuate above and below Base Case levels although in a rather narrow range. U.S. registrations of domestic (U.S./Canadian type) new passenger automobiles, however, are expected to decline below Base Case levels during each of the years, 1978-85, with imported automobiles registering a gain in sales for each year during the period. As shown in the following table, U.S. registrations of domestic new passenger automobiles are projected to drop below Base Case levels in a range between 30,000 and 140,000 units primarily due to decreased consumer demand for the full-sized automobiles. The tax only proposal would likely raise prices of the larger fuel inefficient automobiles.

New passenger automobiles: U.S. registrations, domestic 1/ and total under the FIT proposal and under the Base Case, estimated for 1977-85

Year	Domestic registrations			Total U.S. registrations			Domestic registrations as a share of total U.S. registrations		
	FIT	Base Case	Difference	FIT	Base Case	Difference	FIT	Base Case	Difference
	1,000 units	1,000 units	1,000 units	1,000 units	1,000 units	1,000 units	Percent	Percent	Percent
1977	9,410	9,410	0	10,950	10,950	0	85.9	85.9	0
1978	9,460	9,580	-120	11,030	11,110	-80	85.8	86.2	-.4
1979	9,870	9,900	-30	11,360	11,350	10	86.9	87.2	-.3
1980	10,310	10,340	-30	11,800	11,790	10	87.4	87.7	-.3
1981	10,500	10,620	-120	11,920	12,000	-80	88.0	88.5	-.5
1982	10,780	10,810	-30	12,230	12,210	20	88.1	88.5	-.4
1983	10,990	11,130	-140	12,470	12,550	-80	88.2	88.7	- 5
1984	11,960	12,100	-140	13,550	13,600	-50	88.3	89.0	-.7
1985	12,350	12,490	-140	13,960	14,000	-40	88.5	89.2	-.7

1/ Includes new passenger automobiles from Canada.

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

Again, under the FIT proposal the domestic (U.S./ Canadian) share of total new passenger automobile registrations, by types, is projected to remain the same as that projected under the Base Case and under the FIT/FER proposal. Thus, U.S. registrations of domestic new passenger automobiles as a percent of total U.S. registrations is expected to be 100 percent for mid-size and full-size automobiles and continue to range between 46 and 49 percent for subcompacts, and between 90 and 95 percent for compact and luxury-type automobiles (see previous table on page 77).

During 1978-85, U.S. registrations of new passenger automobiles under the FIT proposal are expected to decline primarily in the full-size category which is predominately composed of U.S./ Canadian type automobiles). The FIT proposal will generally discourage sales of the more fuel inefficient automobiles as shown on the following page.

New passenger automobiles: Share of new registrations, by types, under the FIT proposal and under the Base Case, estimated for 1977-85

(In percent)

Year	Subcompact		Compact		Mid-size		Full-size		Luxury	
	FIT	Base Case	FIT	Base Case	FIT	Base Case	FIT	Base Case	FIT	Base Case
1977	22.3	22.3	18.3	18.3	28.1	28.1	22.2	22.2	9.2	9.2
1978	22.7	22.0	18.2	17.6	28.4	27.6	21.6	23.7	9.1	9.2
1979	21.2	20.6	19.2	18.6	27.7	27.0	22.8	24.6	9.2	9.3
1980	20.4	19.9	20.4	19.8	27.5	27.0	22.3	23.9	9.4	9.4
1981	19.6	18.8	22.4	21.5	27.6	27.0	20.9	23.0	9.6	9.6
1982	19.5	18.7	22.6	21.8	27.2	26.7	21.0	23.0	9.7	9.8
1983	19.2	18.2	23.2	22.1	27.0	26.5	20.7	23.3	9.9	9.9
1984	18.9	17.6	23.6	22.0	27.2	26.3	20.3	24.0	10.1	10.1
1985	17.7	17.2	23.5	22.0	26.7	26.2	21.1	24.3	10.3	10.3

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

U.S. imports.--As indicated in the following table under the FIT proposal, U.S. imports of new passenger automobiles from all countries (except Canada) are expected to increase above the Base Case levels by up to 100,000 units. Most of the sales gains to be registered by imported new passenger automobiles in the U.S. during 1978-85 under the FIT proposal are expected to be due to the increased demand for the subcompact automobile and to a lesser extent to the increased demand for the compact automobile (see the previous table).

New passenger automobiles: U.S. registrations of imports (except Canadian) and their share of total U.S. registrations under the FIT proposal and under the Base Case, estimated for 1977-85

Year	U.S. registrations of imports			U.S. registrations of imports (except Canadian) as a share of total U.S. registrations		
	FIT	Base Case	Difference	FIT	Base Case	Difference
	1,000 units	1,000 units	1,000 units	Percent	Percent	Percent
1977	1,540	1,540	0	14.1	14.1	0
1978	1,568	1,530	38	14.2	13.8	.4
1979	1,448	1,450	-2	12.7	12.8	-.1
1980	1,486	1,450	36	12.6	12.3	.3
1981	1,426	1,380	46	12.0	11.5	.5
1982	1,459	1,400	59	11.9	11.5	.4
1983	1,477	1,420	57	11.8	11.3	.5
1984	1,587	1,500	87	11.7	11.0	.7
1985	1,608	1,510	98	11.5	10.8	.7

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

Canada.--Imports of new passenger automobiles from Canada during the 1977-85 period are projected in the following table. Imported automobiles from Canada are expected to maintain their 9.5 percent share of U.S./Canadian new passenger automobiles registered in the United States under the FIT proposal. The decline below Base Case levels of 2,000 to 14,000 units is in concert with the overall decline in U.S. domestic registrations projected with the FIT proposal.

New passenger automobiles: U.S. registrations of U.S.-made and Canadian-made automobiles, and Canadian-made as a share of total U.S. registrations under the FIT proposal and under the Base Case, estimated for 1977-85

Year	U.S.-made			Canadian-made			U.S. registrations of Canadian-made automobiles as a share of total U.S. registrations		
	FIT	Base Case	Difference	FIT	Base Case	Difference	FIT	Base Case	Difference
	1,000 units	1,000 units	1,000 units	1,000 units	1,000 units	1,000 units	Percent	Percent	Percent
1977	8,519	8,519	0	894	894	0	8.2	8.2	0
1978	8,561	8,670	-109	899	910	-11	8.1	8.2	-.1
1979	8,932	8,961	-29	938	941	-3	8.3	8.3	0
1980	9,330	9,354	-24	980	982	-2	8.3	8.3	0
1981	9,502	9,608	-106	998	1,009	-11	8.5	8.4	.1
1982	9,756	9,780	-24	1,024	1,027	-3	8.4	8.4	0
1983	9,946	10,070	-124	1,044	1,057	-13	8.4	8.4	0
1984	10,824	10,954	-130	1,136	1,150	-14	8.4	8.5	-.1
1985	11,177	11,298	-121	1,173	1,187	-14	8.4	8.5	-.1

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

Japan.--U.S. imports from Japan are expected to comprise approximately 72 percent of the total new foreign passenger automobiles registered in the United States under the FIT proposal; Japan's share was estimated to be 70 percent under the Base Case and 75 percent under the FIT/FER proposal. As shown in the following table, for the 1978-85 period, U.S. registrations from Japan are expected to rise above the Base Case by approximately 61,000 units in 1981 and by about 100,000 units in 1985. Since the subcompact market is expected to increase its relative share of total U.S. new passenger automobile registrations under the FIT proposal and imported automobiles from Japan predominate in this class, it is not surprising to notice increased U.S. imports from Japan during the 1978-85 period.

New passenger automobiles: U.S. registrations from Japan and their share of total U.S. registrations under the FIT proposal and under the Base Case, estimated for 1977-85

Year	U.S. registrations from Japan			U.S. registrations from Japan as a share of total U.S. registrations		
	FIT	Base Case	Difference	FIT	Base Case	Difference
	1,000 units	1,000 units	1,000 units	Percent	Percent	Percent
1977	1,080	1,080	0	9.7	9.7	0
1978	1,129	1,070	59	10.2	9.6	.6
1979	1,043	1,015	28	9.1	8.9	.2
1980	1,070	1,015	55	9.1	8.6	.5
1981	1,027	966	61	8.6	8.0	.6
1982	1,050	980	70	8.6	8.0	.6
1983	1,063	994	69	8.5	7.9	.6
1984	1,143	1,050	93	8.4	7.7	.7
1985	1,158	1,057	101	8.3	7.6	.7

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

All other countries.--With the types of automobiles produced in Japan witnessing increased U.S. demand under the FIT proposal (as compared with the Base Case), U.S. imports of new passenger automobiles from West Germany, Belgium, the United Kingdom, Italy, Sweden, and France are expected to comprise only about 28.0 percent of the new imported automobiles registered in the United States during 1978-85. The following table projects U.S. passenger automobile registrations from all other countries (except Canada and Japan) under the FIT proposal and illustrates the small but negative effect the proposal would likely have with respect to U.S. imports of new passenger automobiles from the countries concerned. Thus, even though U.S. imports of new passenger automobiles registered in the United States during the 1978-85 period are projected to be above Base Case levels, this would be true only for such imports from Japan.

New passenger automobiles: U.S. registrations of imports from all other countries 1/ and their share of total U.S. registrations under the FIT proposal and under the Base Case, estimated for 1977-85

Year	U.S. registrations from all other countries 1/			U.S. registrations from all other countries as a share of total U.S. registrations		
	FIT	Base Case	Difference	FIT	Base Case	Difference
	1,000 units	1,000 units	1,000 units	Percent	Percent	Percent
1977	462	462	0	4.2	4.2	0
1978	439	459	-20	4.0	4.1	-.1
1979	417	435	-18	3.7	3.8	-.1
1980	416	435	-19	3.5	3.7	-.2
1981	399	414	-15	3.3	3.6	-.3
1982	408	420	-12	3.3	3.5	-.2
1983	414	426	-12	3.3	3.4	-.1
1984	444	450	-6	3.3	3.3	0
1985	450	453	-3	3.2	3.2	0

1/ Essentially, West Germany, Belgium, the United Kingdom, Italy, Sweden, and France.

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

Employment.--Implementation of the FIT proposal will result in slight employment losses (compared to the Base Case) in the domestic automobile industry, as shown in the table below.

Employment: Average annual employment 1/ in the domestic automobile industry under the FIT proposal and under the Base Case, 1977-85

Year	Base Case employment	FIT proposal employment	Employment losses under the FIT proposal 2/	Percent of Base Case employment lost under the FIT/FER
	Thousands	Thousands	Thousands	Percent
1977	811	811	0	0
1978	826	818	8	1.0
1979	853	851	2	0.2
1980	891	889	2	0.2
1981	915	907	8	0.9
1982	931	929	2	0.2
1983	959	949	10	1.0
1984	1,043	1,033	10	1.0
1985	1,076	1,067	9	0.8

1/ Employment at U.S. facilities in which complete passenger automobiles and automotive parts are produced. This does not include employment associated with the production and/or assembly of light trucks and parts for such vehicles.

2/ See footnote 1 in the table on page 99.

Source: U.S. International Trade Commission.

The FIT proposal will not affect employment in the domestic passenger automobile industry in 1977. During the 1978-85 period, the FIT proposal will cause employment losses (compared to the Base Case) in the domestic industry ranging from a low of 2,000 employees in 1979, 1980, and 1982 to a high of 10,000 employees in 1983 and 1984. The average employment loss under the FIT proposal compared to the Base Case would be 6,000 employees, or approximately 0.6 percent of annual Base Case employment.

CONSUMER IMPACT

Based upon the output generated by the Wharton EFA Automobile Demand Model in conjunction with the economic assumptions posited by the Commission, it is predicted that the domestic fleet average of new passenger automobiles will not meet the fuel economy standards, as prescribed by law, during the years 1982-85. As indicated below, the shortfall upon the part of domestic manufacturers will range between 1.4 and 2.6 M.P.G. for each of the years concerned under the Base Case and fail by lesser amounts under each of the two remaining cases.

New passenger automobiles: Domestic fleet averages, 1982-85, as required under the law and as projected under the Base Case, the FIT/FER proposal, and the FIT proposal

(In miles per gallon)

	Domestic fleet averages (E.P.A.)			
	Under existing laws and regulations	Base Case	FIT/FER	FIT
1982	24.0	22.6	22.7	22.8
1983	26.0	23.5	23.7	23.8
1984	27.0	24.4	24.7	24.8
1985	27.5	25.3	25.5	25.6

Source: Estimated by the U.S. International Trade Commission based upon Wharton EFA Automobile Demand Model forecasts.

The shortfall predicted is critical in that if the domestic manufacturers do meet the standards prescribed by law (as they, indeed, contend), they will be in a relatively better competitive position

vis a vis imported automobiles than is portrayed in this report. The future is, of course, open to conjecture--the Commission's aim is to provide an assessment of the President's proposal and its likely impact upon the future of the U.S. automobile industry.

Consumer Impact Under the Base Case

Consumer preference

The U.S. consumer has traditionally preferred large, powerful, thus relatively fuel inefficient automobiles. This preference has been influenced by low gasoline prices as well as by the advertising and production practices of the domestic automobile companies. Although during and immediately following the energy crisis of 1973 and 1974 the U.S. consumer appeared to turn away from large automobiles towards smaller, more fuel-efficient automobiles, with the end of the crisis and the subsequent pick-up of the economy record sales of large automobiles and sluggish sales of small automobiles again affirmed the consumer's preference for large automobiles. During the early part of 1977, plants where large automobiles were produced were running overtime in order to keep up with demand, while a number of companies had to offer rebates in order to reduce rising inventories of small automobiles.

In the future, a fundamental shift will take place, i.e. away from large, fuel-inefficient automobiles towards smaller, fuel-efficient automobiles. This shift will occur not because of any overnight change in consumer preferences but because of national

energy conservation goals (as established in present law) and rising fuel prices. In fact, the extent to which smaller, more fuel-efficient automobiles replace the traditional large automobile is by far the most important variable for future energy conservation in the transportation sector of the economy. The Energy Policy and Conservation Act of 1975 establishes future fuel-efficiency standards for automobile manufacturers, and these standards, if met by the manufacturers, will be largely responsible for a shift towards smaller, more fuel-efficient automobiles. Whether or not the U.S. consumer will willingly and readily adapt to the demise of fuel inefficient automobiles and actively seek the smaller, more fuel-efficient automobiles is an open question. There is, however, some evidence that a certain portion of U.S. consumers prefer smaller automobiles, either for their inherent qualities or as second cars.

Under the Base Case, the subcompact and compact share of the actual U.S. yearend stock of automobiles in 1985 will be 40.2 percent compared with 36.9 percent in 1977. The subcompact and compact share of U.S. registrations of new passenger automobiles in 1985 will be 39.2 percent compared with 40.6 percent in 1977. The switch towards compact and subcompact automobiles will be more pronounced than is indicated by the figures shown above because the definitions of the automobile classes will change over time, i.e. a subcompact automobile in 1977 might be a compact automobile in 1985, while a compact automobile in 1977 might be a full-sized automobile in 1985. The full-size automobile of 1985 will probably be a V-6 that will weigh

approximately 3,000 pounds (curb weight); such an automobile is about equivalent to a "compact" automobile of 1977.

The shift towards smaller automobiles which will occur under the Base Case might lead one to believe that consumers will purchase greatly increased numbers of imported automobiles since most of the smaller, fuel-efficient automobiles sold in the United States today consist of imports. Consumers wishing to purchase smaller automobiles often prefer imported automobiles because of their reputation for quality, innovation, maneuverability, design and size (small on the outside but generally large on the inside), fuel economy, price, and, in recent years, improved and expanded dealer networks as well as increased varieties of model offerings. Until recently the domestic industry has not actively competed in the subcompact market to imported automobiles, preferring instead to sell larger automobiles which have greater profit margins. However, this situation is expected to change substantially as domestic manufacturers offer new, improved models and become increasingly competitive in the market for small, fuel-efficient automobiles. The U.S. consumer will have the choice of a much wider variety of domestically produced quality small automobiles, not only from the present domestic manufacturers but also from new domestic plants which will be opened in the United States by foreign automobile manufacturers. Accordingly, under the Base Case, domestic manufacturers are expected to actually increase their share of the subcompact market (from 46 percent in

1977 to 49 percent in 1985) and of the compact market (from 94 percent in 1977 to 95 percent in 1985), while also increasing their share of the total automobile market (from 85.2 percent in 1976 to 89.2 percent in 1985).

Prices

Listed below are projected average prices of domestic and imported automobiles under the Base Case for the 1975-85 period.

New passenger automobiles: Projected prices of domestic and imported automobiles, 1975-85

Year	Subcompact		Compact		Mid-size	Full-size	Luxury	
	Domestic	Imported	Domestic	Imported	Domestic	Domestic	Domestic	Imported
1975	$3,747	$3,907	$4,284	$6,435	$5,171	$5,867	$9,023	$12,692
1976	3,933	4,222	4,485	7,052	5,416	6,143	9,443	14,143
1977	4,259	4,402	4,840	7,385	5,840	6,620	10,174	14,911
1978	4,554	4,629	5,161	7,820	6,225	7,057	10,836	15,936
1979	4,828	4,869	5,477	8,313	6,599	7,477	11,469	17,093
1980	5,090	5,135	5,789	8,875	6,970	7,891	12,076	18,416
1981	5,302	5,409	6,045	9,461	7,273	8,227	12,563	19,812
1982	5,529	5,684	6,318	10,054	7,593	8,582	13,082	21,241
1983	5,744	5,964	6,579	10,660	7,895	8,913	13,563	22,702
1984	5,991	6,246	6,878	11,273	8,234	9,286	14,114	24,185
1985	6,244	6,532	7,186	11,902	8,576	9,659	14,672	25,706

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

Prices of domestic automobiles are projected to rise at annual average rates of 5.2, 5.3, 5.2, 5.1, and 5.0 percent for the subcompact, compact, mid-size, full-size, and luxury classes, respectively, while prices of imported automobiles will rise at average annual rates of 5.3, 6.3, and 7.3 percent for the subcompact, compact, and luxury classes. The projected price increases are based partly on the assumption that the U.S. inflation rate during the 1975-85 period will be somewhat lower than the index of projected foreign export prices, owing to rising labor costs abroad and possible fluctuations in exchange rates. Econometric estimates have shown the shortrun elasticity of substitution between domestic and imported automobiles to be -2, i.e., an increase of one percent in the imported/domestic price ratio for new automobiles leads to a decrease of two percent in the imported/domestic sales ratio for new automobiles. 1/

One study has noted that "the availability in 1975 of small, economical imported cars and the domestic subcompacts . . .saved the purchasers of these cars approximately $1 billion as compared to the cost of buying even the domestic compact models." 2/ In the future, increased substitution of small new automobiles for large ones will lead to even greater annual savings for consumers.

1/ Impact of Trade Policies on the U.S. Automobile Market, Charles River Associates, Cambridge, Mass., October 1976, p. xv.

2/ The Imported Automobile Industry, Harbridge House, Inc., Cambridge, Mass., December 1976, p. 43.

Consumer savings other than price

A shift towards smaller, more efficient automobiles would be beneficial to consumers for reasons other than relatively lower initial purchase prices of automobiles (as consumers increasingly purchase downsized automobiles). In addition to lower initial purchase prices, ownership costs for smaller automobiles are (and will increasingly be) significantly lower than for large automobiles. A Federal Highway Administration study 1/ on the costs of automobile ownership in the United States indicated that ownership costs per mile are approximately 30 percent less for subcompacts than for full-size automobiles and approximately 18 percent less for compact automobiles compared with full-size automobiles.

New passenger automobiles: Automobile ownership costs 1976 1/

(In cents per mile)

Class	Depreciation	Maintenance	Gas and oil	Parking and tolls	Insurance	Taxes	Total costs
Subcompact	3.2	3.1	1.8	2.1	1.5	0.9	12.6
Compact	3.8	3.4	2.5	2.1	1.6	1.2	14.6
Standard	4.9	4.2	3.3	2.2	1.7	1.6	17.9

1/ Suburban-based operation.

Source: Federal Highway Administration data appearing in The Imported Automobile Industry, Harbridge House, Inc., Cambridge, Mass., December 1976, p. 45.

1/ Referred to in The Imported Automobile Industry, op. cit., p. 43.

Translated into total ownership costs, the figures shown above indicate that total costs of operating a subcompact automobile are $1,260 per year, compared with $1,460 per year for a compact automobile and $1,790 per year for a full-size automobile. 1/ Accordingly, the owner of a subcompact automobile saves $530 per year over the owner of a full-size automobile; in the future, especially with rising fuel costs, the annual amount saved by owning a small automobile rather than a large one should increase significantly over the figures shown above.

Safety

The shift toward smaller, lighter, and less powerful automobiles which will occur under the Base Case could theoretically mean increased passenger injuries and fatalities, on the basis of the argument that occupants of smaller automobiles are more susceptible to bodily harm. However, existing and future advances in the application of engineering and safety improvements could insure that automobiles of the future, albeit smaller, could maintain high safety standards. In fact, some of the most important safety features that exist (disc brakes, radial tires, rack-and-pinion steering, independent suspension, and impact-absorbing front and rear compartments) first appeared in small automobiles; such features are now increasingly utilized on large automobiles. By 1985, most new automobiles of all sizes could be safer than present-day automobiles.

1/ The Imported Automobile Industry, p. 46.

Consumer Impact Under the FIT/FER Proposal

Consumer preferences

The trend toward smaller, more fuel-efficient automobiles which will occur even without the FIT/FER proposal will be somewhat accelerated by the implementation of the FIT/FER proposal. With the FIT/FER, 43.7 percent of new automobile registrations in 1985 will consist of subcompacts and compacts, compared with 39.2 percent under the Base Case in 1985; this translates into an increase of 611,000 registrations of subcompact and compact automobiles in 1985 over the Base Case. Since consumers will purchase 611,000 more subcompact and compact automobiles in 1985 under the FIT/FER proposal than under the Base Case, it is likely that automobile producers will give consumers a slightly greater range of models and model variations in the subcompact and compact classes in that year. Purchase of full-size automobiles will decrease by 674,000 units under the FIT/FER compared with the Base Case; accordingly, consumers will likely have fewer full-size automobile models and types from which to choose. Consumer purchases and choices of mid-size and luxury automobiles will be virtually the same under the FIT/FER proposal as under the Base Case.

Under the FIT/FER proposal, consumers will purchase 328,000 fewer domestic automobiles in 1985 than under the Base Case; this is owing entirely to the 674,000 unit drop in registrations of full-size automobiles. Purchases of domestic subcompact, compact, mid-size, and luxury automobiles will actually increase by 346,000 units under the FIT/FER in 1985 compared with the Base Case.

Prices

Listed below are projected prices of domestic and imported automobiles for the 1977-85 period under the FIT/FER proposal and under the Base Case. The FIT/FER prices shown would exaggerate the consumer savings on subcompact and compact automobiles and the consumer "taxes" on other automobiles, if manufacturers and dealers raise the prices on small automobiles (thus absorbing part of the consumer's rebate) and perhaps even lower the prices of large automobiles (thus dampening the effect of the tax). Since the extent of such actions by manufacturers and dealers cannot be predicted, the prices shown below indicate the effect on the consumer if the full tax and/or rebate were passed through at the retail level. In this regard, even if the full impact of the applicable tax or rebate (as the case may be) is not passed on to the consumer, the full amount of such tax or rebate will be indicated on the sticker of the automobile. This fact will give the consumer the impression that he or she is in fact paying the entire tax or benefitting from the entire rebate, as the case may be.

New passenger automobiles: Average prices of domestic and imported subcompact and compact automobiles under the FIT/FER proposal and the Base Case, 1977-85

Year	Subcompact								Compact							
	Domestic				Imported				Domestic				Imported			
	Base Case price	FIT/FER			Base Case price	FIT/FER			Base Case price	FIT/FER			Base Case price	FIT/FER		
		Price	Difference			Price	Difference			Price	Difference			Price	Difference	
	Dollars	Dollars	Dollars	Percent	Dollars	Dollars	Dollars	Percent	Dollars	Dollars	Dollars	Percent	Dollars	Dollars	Dollars	Percent
1977	4,259	4,259	0	0	4,402	4,402	0	0	4,840	4,840	0	0	7,385	7,385	0	0
1978	4,554	4,291	-263	-5.8	4,629	4,292	-336	-7.3	5,161	5,068	-93	-1.8	7,820	7,585	-235	-3.0
1979	4,828	4,533	-295	-6.1	4,869	4,549	-320	-6.6	5,477	5,383	-94	-1.7	8,313	8,075	-238	-2.9
1980	5,090	4,791	-299	-5.9	5,135	4,810	-325	-6.3	5,789	5,652	-136	-2.4	8,875	8,634	-241	-2.7
1981	5,302	4,996	-306	-5.8	5,409	5,103	-306	-5.6	6,045	5,908	-138	-2.3	9,461	9,248	-212	-2.2
1982	5,529	5,186	-343	-6.2	5,684	5,341	-343	-6.0	6,318	6,212	-106	-1.7	10,054	9,857	-197	-2.0
1983	5,744	5,396	-348	-6.1	5,964	5,649	-315	-5.3	6,579	6,473	-106	-1.6	10,660	10,461	-199	-1.9
1984	5,991	5,644	-348	-5.8	6,246	5,898	-348	-5.6	6,878	6,818	-60	-0.9	11,273	11,103	-170	-1.5
1985	6,244	5,862	-382	-6.1	6,532	6,195	-337	-5.2	7,186	7,121	-65	-0.9	11,902	11,716	-186	-1.6

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

New passenger automobiles: Average prices of domestic and imported mid-size, full-size, and luxury automobiles under the FIT/FER proposal and under the Base Case, 1977-85

Year	Mid-size				Full-size				Luxury							
	Domestic 1/				Domestic 1/				Domestic				Imported			
	Base Case price	FIT/FER			Base Case price	FIT/FER			Base Case price	FIT/FER			Base Case price	FIT/FER		
		Price	Difference			Price	Difference			Price	Difference			Price	Difference	
	Dollars	Dollars	Dollars	Percent	Dollars	Dollars	Dollars	Percent	Dollars	Dollars	Dollars	Percent	Dollars	Dollars	Dollars	Percent
1977	5,840	5,840	0	0	6,620	6,620	0	0	10,174	10,174	0	0	14,911	14,911	0	0
1978	6,225	6,225	0	0	7,057	7,175	+117	+1.7	10,836	10,953	+117	+1.1	15,936	15,886	-49	- .3
1979	6,599	6,599	0	0	7,477	7,594	+116	+1.6	11,469	11,654	+185	+1.6	17,093	17,093	0	0
1980	6,970	6,970	0	0	7,891	8,008	+117	+1.5	12,076	12,261	+185	+1.5	18,416	18,416	0	0
1981	7,273	7,327	+55	+0.8	8,227	8,410	+183	+2.2	12,563	12,820	+257	+2.0	19,812	19,866	+55	+0.3
1982	7,593	7,653	+60	+0.8	8,582	8,781	+199	+2.3	13,082	13,361	+280	+2.1	21,241	21,367	+126	+0.6
1983	7,895	8,020	+125	+1.6	8,913	9,189	+276	+3.1	13,563	13,926	+363	+2.7	22,702	22,900	+198	+0.9
1984	8,234	8,370	+136	+1.6	9,286	9,676	+391	+4.2	14,114	14,606	+492	+3.5	24,185	24,483	+298	+1.2
1985	8,576	8,807	+231	+2.7	9,659	10,078	+419	+4.3	14,672	15,198	+526	+3.6	25,706	26,026	+321	+1.2

1/ There are no imported automobiles in this class.

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

As shown in the preceding tables, the FIT/FER would lead to lower average prices for consumers on subcompact and compact automobiles, and generally higher average prices for mid-size, full-size, and luxury automobiles compared with the Base Case. The most significant price changes occur in the subcompact class; in 1985, the price of a domestic subcompact would be $382 (or 6.1 percent) less under the FIT/FER than under the Base Case, while the price of an imported subcompact would be $337 (or 5.2 percent) less than under the Base Case. Prices of compact automobiles will not change significantly under the FIT/FER proposal. Mid-size, full-size, and luxury automobiles will generally increase in price under the FIT/FER proposal; the largest absolute price increase ($526) will be for 1985 domestic luxury automobiles, while the greatest percentage price increase will be 4.3 percent for the 1985 full-size automobiles, all of which are domestically produced.

Consumer Impact Under the FIT Proposal

Consumer preference

With the FIT proposal, 42 percent of new automobile registrations in 1985 will consist of subcompacts and compacts, compared with 39.2 percent under the Base Case; this signifies an increase of 367,000 registrations of 1985 subcompact and compact automobiles over the Base Case. The 367,000-unit increase of registrations will probably not significantly affect the types and variations of models which will be offered to consumers in the subcompact and compact classes. Consumers will purchase 452,000 fewer full-size automobiles under the FIT proposal in 1985 compared with the Base Case. Purchases of mid-size automobiles will increase by 56,000 units over the Base Case in 1985 while purchases of luxury automobiles will be virtually the same under the FIT proposed as under the Base Case.

Under the FIT proposal, consumers will purchase 134,000 fewer domestic automobiles in 1985 than under the Base Case; this is because of the 452,000-unit decrease in registrations of full-size automobiles (all of which are domestically produced) under the FIT proposal. Purchases of domestic subcompact, compact, mid-size, and luxury automobiles will actually increase by 318,000 units under the FIT in 1985 compared with what would happen under the Base Case.

Prices

Listed below are projected average prices of domestic and imported automobiles for the 1977-85 period under the FIT proposal and under the

Base Case. The FIT prices shown may slightly exaggerate the prices to the consumer, since it is expected that manufacturers and dealers will lower prices slightly on large automobiles (thus dampening the tax effect) and perhaps raise prices slightly on small automobiles. Tables are not shown for subcompact and compact automobiles since projections show that prices of these automobiles (both domestic and imported) will be no different under the FIT proposal than they will be under the Base Case.

New passenger automobiles: Average prices of domestic and imported mid-size, full-size, and luxury automobiles under the FIT proposal and the Base Case, 1977-85

Year	Mid-size				Full-size				Luxury							
	Domestic 1/				Domestic 1/				Domestic				Imported			
	Base Case price	FIT			Base Case price	FIT			Base Case price	FIT			Base Case price	FIT		
		Price	Difference			Price	Difference			Price	Difference			Price	Difference	
	Dollars	Dollars	Dollars	Percent	Dollars	Dollars	Dollars	Percent	Dollars	Dollars	Dollars	Percent	Dollars	Dollars	Dollars	Percent
1977	5,840	5,840	0	0	6,620	6,620	0	0	10,174	10,174	0	0	14,911	14,911	0	0
1978	6,225	6,225	0	0	7,057	7,175	+117	+1.7	10,836	10,953	+117	+1.1	15,936	15,886	0	0
1979	6,599	6,599	0	0	7,477	7,594	+116	+1.6	11,469	11,654	+185	+1.6	17,093	17,093	0	0
1980	6,970	6,970	0	0	7,891	8,008	+117	+1.5	12,076	12,261	+185	+1.5	18,416	18,416	0	0
1981	7,273	7,327	+55	+0.8	8,227	8,410	+183	+2.2	12,563	12,820	+257	+2.0	19,812	19,866	+55	+0.3
1982	7,593	7,653	+60	+0.8	8,582	8,781	+199	+2.3	13,082	13,361	+280	+2.1	21,241	21,367	+126	+0.6
1983	7,895	8,020	+125	+1.6	8,913	9,189	+276	+3.1	13,563	13,926	+363	+2.7	22,702	22,900	+198	+0.9
1984	8,234	8,370	+136	+1.6	9,286	9,676	+391	+4.2	14,114	14,606	+492	+3.5	24,185	24,483	+298	+1.2
1985	8,576	8,807	+231	+2.7	9,659	10,078	+419	+4.3	14,672	15,198	+526	+3.6	25,706	26,026	+321	+1.2

1/ There are no imported automobiles in this class.

Source: Estimated by the U.S. International Trade Commission on the basis of Wharton EFA Automobile Demand Model forecasts.

The price effect on mid-size, full-size, and luxury automobiles of the FIT proposal compared with the Base Case is identical to the effect that the FIT/FER proposal would have on such automobiles; prices will either remain the same or increase, with the largest absolute price increase ($526) being for 1985 domestic luxury automobiles, and the largest percentage price increase (4.3 percent) being for the 1985 full-size automobiles.

EFFECTS OF THE PRESIDENT'S ENERGY PROPOSAL ON LIGHT TRUCKS

For all practical purposes, as indicated below, the U.S. light-truck industry is similar to that of the U.S. passenger automobile industry except for its significantly smaller size and its intended cargo.

It is expected that--like the projections under the Base Case, the FIT/FER and the FIT proposal for passenger automobiles--U.S. registrations of domestically produced light-trucks will generally increase in importance during the 1978-85 period under the Base Case and decline somewhat below Base Case levels under the FIT/FER and the FIT proposals. U.S. registrations of imported light-trucks are also expected to respond similarly to the projections already forwarded in this report for imported new passenger automobiles. That is, imported light-truck registrations in the United States will decrease during the 1978-85 period under the Base Case and reach levels above the Base Case under the FIT/FER and FIT proposals (with the greatest increased registrations expected under the FIT/FER proposal). A review of present trends in the light-truck industry follows.

Four major producers accounted for over 99 percent of the domestic output of new lightweight trucks for the 1976 calendar year. These producers are identical to those that accounted for over 99 percent of the domestic automobile output. They are: General Motors Corp., which produces the Chevrolet and GMC lightweight trucks; Ford Motor Corp.,

which produces trucks under the Ford nameplate; Chrysler Corp., which produces Dodge and Plymouth lightweight trucks; and American Motors Corp., which produces the Jeep vehicle and the AM General utility vehicles. The only other domestic manufacturer of lightweight trucks is International Trucks, a division of International Harvester Company, which produces less than 0.5 percent of the domestic lightweight truck output.

Total production of new lightweight trucks by domestic manufacturers for the 1976 calendar year was approximately 1.2 million units. Of this total, General Motors accounted for 60 percent, Ford 27.4 percent, Chrysler 7 percent, American Motors 5.2 percent, and International less than 0.5 percent.

In 1976 there were 22 major lightweight-truck assembly plants located in 13 different states. General Motors operated 8 of these assembly plants, Ford 9, Chrysler 2, American Motors 2, and International 1. Chrysler and International assemble both light and medium/heavy trucks in the same facilities, while General Motors and Ford have separate locations for assembly of medium and heavy trucks. American Motors does not produce either heavy or medium trucks; but it does produce transit buses.

General Motors and Ford, independently, in joint efforts with a Japanese manufacturer, Isuzu Motor Co. and Toyo Kogyo, respectively, have each imported small lightweight pickup trucks into the United States since the early 1970's. The pickup truck imported by General Motors, the Luv (light utility vehicle), is distributed primarily by

the Chevrolet division of General Motors. The pickup truck imported by Ford, the Courier, is distributed primarily by Ford Motor Co.'s automobile division.

There are also three other small lightweight pickup trucks imported into the United States from Japan. These are: Toyota, which is manufactured by Toyota Motor Co.; Datsun, manufactured by Nissan Motor Co.; and Mazda, manufactured by Toyo Kogyo.

The only other lightweight trucks that are imported into the United States are manufactured by Volkswagen of West Germany. Although Volkswagen small trucks and vans were popular during the 1960-70 period, their share of the imported lightweight truck market slipped to less than 0.5 percent in 1976.

Total importation of lightweight trucks from Japan for the 1976 calendar year was approximately 236,000 units. Of this total, Toyota accounted for 20.7 percent, Datsun 34 percent, the Ford Courier 23.1 percent, the Chevrolet Luv 19.4 percent, and the Mazda 2.8 percent.

The primary difference between the imported lightweight pickup trucks (pickup trucks account for over 80 percent of domestic lightweight truck sales, and virtually all of the imported lightweight truck sales) and those produced domestically is the size of the vehicle. The domestic base model pickup trucks average about 3,700 pounds, while the imported base model pickup trucks average about 2,400 pounds. Since gasoline consumption is normally directly proportional to weight, the imported models tend to achieve better gas

mileage than do domestic pickup trucks. According to the gas mileage ratings published by the Environmental Protection Agency for the 1977 model year, the average combined city/highway fuel economy for a domestically produced lightweight truck is about 16 MPG, while the imported models averaged about 22 MPG.

Since lightweight trucks are thought, to some extent, to be substitutable for automobiles, most of the data and the results presented in the main section of this report concerning automobiles also would apply to lightweight trucks. Presently, lightweight trucks account for 23 percent of the total automobile/lightweight truck market, and some analysts from the domestic manufacturers believe this share might increase to 27 to 29 percent by 1985, stimulated by new product offerings probably of the type that combine the best features of the present automobile and lightweight truck.

APPENDIX A

DRAFT OF PROPOSED LEGISLATION TO ESTABLISH A COMPREHENSIVE NATIONAL ENERGY POLICY

PART B, SUBPART 1
FUEL EFFICIENCY INCENTIVE TAX

93-188 O - 77 - 11

PART B - TRANSPORTATION

Subpart 1 - Fuel Efficiency Incentive Tax

SEC. 1201. FUEL INEFFICIENCY TAX.

(a) General Rule.--Part I of subchapter A of chapter 32 (relating to motor vehicle excise taxes) is amended by adding at the end thereof the following new section:

"Sec. 4064. FUEL INEFFICIENCY TAX.

"(a) Imposition of Tax.--Except as provided in subsection (b), a tax is hereby imposed on the sale by the manufacturer of each automobile, determined in accordance with the following tables:

"(1) In the case of a 1978 model year passenger automobile:

"If the fuel economy of the model type in which the passenger automobile falls is: The tax is:

At least 18	$ 0
At least 17 but less than 18	$ 52
At least 16 but less than 17	$112
At least 15 but less than 16	$179
At least 14 but less than 15	$256
At least 13 but less than 14	$345
Less than 13	$449

"(2) In the case of a 1979 model year automobile:

"If the fuel economy of the model type in which the automobile falls is: The tax is:

At least 19	$ 0
At least 18 but less than 19	$ 52
At least 17 but less than 18	$111
At least 16 but less than 17	$178
At least 15 but less than 16	$258
At least 14 but less than 15	$339
At least 13 but less than 14	$438
Less than 13	$553

"(3) In the case of a 1980 model year automobile:

"If the fuel economy of the model type in which the automobile falls is: The tax is:

At least 20	$ 0
At least 19 but less than 20	$ 52
At least 18 but less than 19	$111
At least 17 but less than 18	$176
At least 16 but less than 17	$249
At least 15 but less than 16	$333
At least 14 but less than 15	$428
At least 13 but less than 14	$538
Less than 13	$666

"(4) In the case of a 1981 model year automobile:

"If the fuel economy of the model type in which the automobile falls is: The tax is:

At least 21.5	$ 0
At least 20.5 but less than 21.5	$ 52
At least 19.5 but less than 20.5	$110
At least 18.5 but less than 19.5	$174
At least 17.5 but less than 18.5	$245
At least 16.5 but less than 17.5	$325
At least 15.5 but less than 16.5	$416
At least 14.5 but less than 15.5	$519
At least 13.5 but less than 14.5	$637
At least 12.5 but less than 13.5	$774
Less than 12.5	$935

"(5) In the case of a 1982 model year automobile:

"If the fuel economy of the model type in which the automobile falls is: The tax is:

At least 23	$ 0
At least 22 but less than 23	$ 57
At least 21 but less than 22	$ 120
At least 20 but less than 21	$ 189
At least 19 but less than 20	$ 266
At least 18 but less than 19	$ 351
At least 17 but less than 18	$ 446
At least 16 but less than 17	$ 553
At least 15 but less than 16	$ 674
At least 14 but less than 15	$ 812
At least 13 but less than 14	$ 972
Less than 13	$1159

"(6) In the case of a 1983 model year automobile:

"If the fuel economy of the model type in which the automobile falls is: The tax is:

At least 24.5	$ 0
At least 23.5 but less than 24.5	$ 57
At least 22.5 but less than 23.5	$119
At least 21.5 but less than 22.5	$188
At least 20.5 but less than 21.5	$262
At least 19.5 but less than 20.5	$345
At least 18.5 but less than 19.5	$437
At least 17.5 but less than 18.5	$539
At least 16.5 but less than 17.5	$653
At least 15.5 but less than 16.7	$782
At least 14.5 but less than 15.5	$929
At least 13.5 but less than 14.5	$1098
At least 12.5 but less than 13.5	$1294
Less than 12.5	$1524

"(7) In the case of a 1984 model year automobile:

"If the fuel economy of the model type in which the automobile falls is:

The tax is:
At least 26	$ 0
At least 25 but less than 26	$ 62
At least 24 but less than 25	$ 129
At least 23 but less than 24	$ 203
At least 22 but less than 23	$ 283
At least 21 but less than 22	$ 371
At least 20 but less than 21	$ 467
At least 19 but less than 20	$ 574
At least 18 but less than 19	$ 693
At least 17 but less than 18	$ 825
At least 16 but less than 17	$ 974
At least 15 but less than 16	$1143
At least 14 but less than 15	$1336
At least 13 but less than 14	$1559
Less than 13	$1819

"(8) In the case of a 1985 or later model year automobile:

"If the fuel economy of the model type in which the automobile falls is:

The tax is:
At least 27.5	$ 0
At least 26.5 but less than 27.5	$ 67
At least 25.5 but less than 26.5	$ 140
At least 24.5 but less than 25.5	$ 219
At least 23.5 but less than 24.5	$ 304
At least 22.5 but less than 23.5	$ 397
At least 21.5 but less than 22.5	$ 499
At least 20.5 but less than 21.5	$ 610
At least 19.5 but less than 20.5	$ 733
At least 18.5 but less than 19.5	$ 869
At least 17.5 but less than 18.5	$1021
At least 16.5 but less than 17.5	$1192
At least 15.5 but less than 16.5	$1384
At least 14.5 but less than 15.5	$1603
At least 13.5 but less than 14.5	$1854
At least 12.5 but less than 13.5	$2146
Less than 12.5	$2488

"(b) Alternative tax.--If the average fuel economy standard prescribed under section 502 of the Motor Vehicle Information and Cost Savings Act (15 U.S.C. 2002) applicable to any class of automobiles differs from the lowest fuel economy level for which no tax is imposed under subsection (a) for the model year, then the tax imposed with respect to such class by subsection (a) for the model year shall be determined in accordance with a table prescribed for such year by the Secretary. Such table shall take the same general form as that in subsection (a) except that no tax shall be imposed at or above the level of fuel economy which is equal to the average fuel economy standard prescribed for that class of automobile for the model year. The tax for each whole mile per gallon below the level at which no tax is imposed shall be determined by multiplying the tax correction factor for the year by the difference between a fraction created by dividing 100,000 by the fuel economy for which the tax is to be imposed, and a fraction created by dividing 100,000 by the average fuel economy standard. The maximum tax prescribed by the Secretary for any class of automobiles for any model year may not exceed the maximum tax prescribed in subsection (a) for that model year. The Secretary shall prescribe such table prior to the beginning of the model year.

"(c) Definitions and Special Rules.--For purposes of this section--

"(1) Automobile, etc.--The terms 'automobile', 'passenger automobile', 'fuel economy', 'average fuel economy standard', 'model type', and 'model year' have the same meaning as such terms have under section 501 of the Motor Vehicle Information and Cost Savings Act (15 U.S.C. 2001).

"(2) Manufacturer.--The term 'manufacturer' includes a producer or importer.

"(3) Tax Correction Factor.--For purposes of the alternative tax of subsection (b) of this section, the tax correction factor for each model year is as follows:

1978	16.16 cents
1979	18.04 cents
1980	20.00 cents
1981	23.10 cents
1982	29.08 cents
1983	33.00 cents
1984	40.55 cents
1985 and thereafter	49.14 cents "

(b) Denial of Certain Exemptions and Refunds.--

(1) Tax-free sales.--Subsection (a) of section 4221 (relating to certain tax-free sales) is amended by adding a new sentence at the end thereof to read as follows: "Paragraphs (4) and (5) shall not apply to the tax imposed by section 4064."

(2) Denial of refunds for certain uses.--Paragraph (2) of section 6416(b) (relating to tax payments considered overpayments in the case of specified uses and resales) is amended by adding a new sentence at the end thereof to read as follows: "Subparagraphs (C) and (D) shall not apply in the case of any tax paid under section 4064."

(c) Payment of Tax in Case of Leased Automobiles.--Section 4217 (relating to leases) is amended by adding at the end thereof the following new subsection:

"(e) Leases of Certain Automobiles.--

"(1) In general.--In the case of an initial lease of an automobile by a manufacturer taxable under section 4064, there shall be paid by the manufacturer upon each lease payment that portion of the total fuel inefficiency tax which bears the same ratio to such total fuel inefficiency tax as such payment bears to the total amount to be paid under such initial lease. In any case where an automobile which has been leased is sold or otherwise disposed of before the total fuel inefficiency tax has been paid, there shall be paid by the manufacturer upon such sale or disposition the difference between the tax paid on the lease payments and the total fuel inefficiency tax.

"(2) Lease other than initial lease not considered as sale.--Any lease of an automobile by the manufacturer, producer, or importer, other than the initial lease of such automobile, shall not be considered under subsection (a) as a sale of such automobile.

"(3) Sale after total fuel inefficiency tax paid.--If an automobile taxable under section 4064 is sold after the total fuel inefficiency tax is paid, no tax shall be imposed under this chapter on such sale.

"(4) Total fuel inefficiency tax defined.--For purposes of this subsection, the term 'total fuel inefficiency tax' means the tax imposed by section 4064 computed at the rate in effect on the date of the initial lease."

(d) Clerical Amendment.--The table of sections for part I of subchapter A of Chapter 32 is amended by adding at the end thereof the following new item:

"Sec. 4064. FUEL INEFFICIENCY TAX."

SEC. 1202. FUEL EFFICIENCY REBATE.

(a) General Rule.--Subchapter B of chapter 65 (relating to rules of special application in the case of abatements, credits, and refunds) is amended by adding at the end thereof the following new section:

"Sec. 6429. FUEL EFFICIENCY REBATE. "(a) In general. -- An amount shall be paid or credited to the manufacturer with respect to the sale of --

"(1) each 1977 passenger automobile and each 1978 or later model year automobile which is domestically manufactured and which is sold by the manufacturer after May 1, 1977;

"(2) each 1977 model year passenger automobile which is not manufactured domestically, and which is sold by the manufacturer after May 1, 1977, but only to the extent provided in an executive agreement applicable to such automobile which is entered into after April 30, 1977, and before May 1, 1978, and which, pursuant to such agreement, is to be effective for the time during which such passenger automobile is sold; and

"(3) each 1978 and later model year automobile which is not manufactured domestically, and which is sold by the manufacturer after May 1, 1977, but only to the extent provided in an executive agreement applicable to such automobile which takes effect after May 1, 1977.

Such amount shall be equal to the lesser of $500 or the amount determined by multiplying the base rebate determined under subsection (b) or (c) by the rebate coefficient determined in accordance with subsection (e). Any executive agreement entered into with any country to provide for a payment or credit under this section shall be designed to assure that manufacturers of domestically manufactured automobiles are not disadvantaged by the system of taxes and rebates under section 4064 and this section.

"(b) Base Rebate.--(1) Except as provided in paragraphs (2) and (3), the base rebate is an amount determined as follows:

"(1) In the case of a 1977 or 1978 model year passenger automobile:

"If the fuel economy of the model type in which the automobile falls is: The base rebate is:

At least 18 but less than 19	$ 0
At least 19 but less than 20	$ 47
At least 20 but less than 21	$ 89
At least 21 but less than 22	$128
At least 22 but less than 23	$163
At least 23 but less than 24	$195
At least 24 but less than 25	$224
At least 25 but less than 26	$251
At least 26 but less than 27	$276
At least 27 but less than 28	$299
At least 28 but less than 29	$321
At least 29 but less than 30	$341
At least 30 but less than 31	$359
At least 31 but less than 32	$377
At least 32 but less than 33	$393
At least 33 but less than 34	$408
At least 34 but less than 35	$423
At least 35 but less than 36	$436
At least 36 but less than 37	$449
At least 37 but less than 38	$461
At least 38 but less than 39	$473
More than 39	$473

"(2) In the case of a 1979 model year passenger automobile:

"If the fuel economy of the model type in which the automobile falls is: The base rebate is:

At least 19 but less than 20-----	$ 0
At least 20 but less than 21-----	$ 47
At least 21 but less than 22-----	$ 90
At least 22 but less than 23-----	$129
At least 23 but less than 24-----	$165
At least 24 but less than 25-----	$197
At least 25 but less than 26-----	$227
At least 26 but less than 27-----	$255
At least 27 but less than 28-----	$281
At least 28 but less than 29-----	$305
At least 29 but less than 30-----	$327
At least 30 but less than 31-----	$348
At least 31 but less than 32-----	$367
At least 32 but less than 33-----	$385
At least 33 but less than 34-----	$402
At least 34 but less than 35-----	$416
At least 35 but less than 36-----	$433
At least 36 but less than 37-----	$448
At least 37 but less than 38-----	$461
At least 38 but less than 39-----	$474
More than 39----------	$474

"(3) In the case of a 1980 model year passenger automobile:

"If the fuel economy of the model type in which the automobile falls is: The base rebate is:

At least 20 but less than 21	$ 0
At least 21 but less than 22	$ 47
At least 22 but less than 23	$ 90
At least 23 but less than 24	$130
At least 24 but less than 25	$166
At least 25 but less than 26	$199
At least 26 but less than 27	$230
At least 27 but less than 28	$259
At least 28 but less than 29	$285
At least 29 but less than 30	$310
At least 30 but less than 31	$333
At least 31 but less than 32	$354
At least 32 but less than 33	$374
At least 33 but less than 34	$393
At least 34 but less than 35	$411
At least 35 but less than 36	$428
At least 36 but less than 37	$444
At least 37 but less than 38	$459
At least 38 but less than 39	$473
More than 39	$473

"(4) In the case of a 198: model year passenger automobile:

"If the fuel economy of the model type in which the automobile falls is: The base rebate is:

At least 21.5 but less than 22.5--	$ 0
At least 22.5 but less than 23.5--	$ 47
At least 23.5 but less than 24.5--	$ 91
At least 24.5 but less than 25.5--	$131
At least 25.5 but less than 26.5--	$168
At least 26.5 but less than 27.5--	$202
At least 27.5 but less than 28.5--	$234
At least 28.5 but less than 29.5--	$264
At least 29.5 but less than 30.5--	$291
At least 30.5 but less than 31.5--	$317
At least 31.5 but less than 32.5--	$340
At least 32.5 but less than 33.5--	$363
At least 33.5 but less than 34.5--	$385
At least 34.5 but less than 35.5--	$405
At least 35.5 but less than 36.5--	$423
At least 36.5 but less than 37.5--	$441
At least 37.5 but less than 38.5--	$458
At least 38.5 but less than 39.5--	$474
More than 39.5----------	$474

"(5) In the case of a 1982 model year passenger automobile:

"If the fuel economy of the model type in which the automobile falls is: The base rebate is:

At least 23 but less than 24	$ 0
At least 24 but less than 25	$ 52
At least 25 but less than 26	$101
At least 26 but less than 27	$145
At least 27 but less than 28	$187
At least 28 but less than 29	$225
At least 29 but less than 30	$261
At least 30 but less than 31	$295
At least 31 but less than 32	$326
At least 32 but less than 33	$355
At least 33 but less than 34	$383
At least 34 but less than 35	$409
At least 35 but less than 36	$433
At least 36 but less than 37	$456
At least 37 but less than 38	$478
At least 38 but less than 39	$499
More than 39	$499

"(6) In the case of a 1983 model year passenger automobile:

"If the fuel economy of the model type in which the automobile falls is: The base rebate is:

At least 24.5 but less than 25.5	$ 0
At least 25.5 but less than 26.5	$ 52
At least 26.5 but less than 27.5	$101
At least 27.5 but less than 28.5	$147
At least 28.5 but less than 29.5	$189
At least 29.5 but less than 30.5	$228
At least 30.5 but less than 31.5	$265
At least 31.5 but less than 32.5	$299
At least 32.5 but less than 33.5	$331
At least 33.5 but less than 34.5	$361
At least 34.5 but less than 35.5	$390
At least 35.5 but less than 36.5	$417
At least 36.5 but less than 37.5	$442
At least 37.5 but less than 38.5	$467
More than 38.5	$490

"(7) In the case of a 1984 model year passenger automobile:

"If the fuel economy of the model type in which the automobile falls is: The base rebate is:

At least 26 but less than 27-----	$ 0
At least 27 but less than 28-----	$ 57
At least 28 but less than 29-----	$111
At least 29 but less than 30-----	$161
At least 30 but less than 31-----	$207
At least 31 but less than 32-----	$251
At least 32 but less than 33-----	$292
At least 33 but less than 34-----	$330
At least 34 but less than 35-----	$366
At least 35 but less than 36-----	$400
At least 36 but less than 37-----	$433
At least 37 but less than 38-----	$463
At least 38 but less than 39-----	$492
More than 39----------	$492

"(8) In the case of a 1985 or later model year passenger automobile:

"If the fuel economy of the model type in which the automobile falls is: The base rebate is:

At least 27.5 but less than 28.5--	$ 0
At least 28.5 but less than 29.5--	$ 62
At least 29.5 but less than 30.5--	$121
At least 30.5 but less than 31.5--	$176
At least 31.5 but less than 32.5--	$227
At least 32.5 but less than 33.5--	$275
At least 33.5 but less than 34.5--	$320
At least 34.5 but less than 35.5--	$362
At least 35.5 but less than 36.5--	$403
At least 36.5 but less than 37.5--	$440
At least 37.5 but less than 38.5--	$476
At least 38.5 but less than 39.5--	$493
More than 39.5----------	$500

"(c) In the case of an electric automobile, the payment or credit is equal to the highest payment or credit available for passenger automobiles of that model year.

"(d) Source of Payment.--The payment of credit described in subsection (a) shall be made from the General Fund of the Treasury from funds not otherwise appropriated.

"(e) Rebate coefficient.--(A) A rebate coefficient shall be determined by the Secretary, in consultation with the Administrator of the Environmental Protection Agency, for the automobiles manufactured in model years 1977 and 1978, and for each subsequent model year thereafter. The Secretary shall publish the rebate coefficient in the Federal Register no later than 30 days after date of enactment in the case of the 1977 and 1978 model years and, in the case of each subsequent model year, no later than the end of the preceding model year. Rebate coefficients for automobiles with respect to which payments are required to be paid under subsection (a) shall be determined so that the aggregate amount for the model years 1977 and 1978, or for any subsequent model year, paid or credited under this section with respect to such automobiles approximates, as closely as possible, an estimate made by the Secretary, prior to the beginning of the model year, of the amount of

tax to be collected under section 4064 with respect to sales of model year automobiles, less the expenses of administration of the requirements of this subpart.

"(B) For purposes of this section, section 503 (b)(2)(E) of the Motor Vehicle Information and Cost Savings Act (15 U.S.C. 2003) shall apply in determining if an automobile is manufactured domestically.

"(f) If the average fuel economy standard prescribed under section 502 of the Motor Vehicle Information and Cost Savings Act (15 U.S.C. 2002) applicable to any class of passenger automobiles for a model year differs from the highest fuel economy for which no base rebate is prescribed under subsection (b) for the model year, then the base rebate with respect to such class for the model year shall be determined in accordance with a table prescribed for such year by the Secretary. Such a table shall take the same general form as that in subsection (b) except that no base rebate shall be prescribed at or below the level of the average fuel economy standard prescribed for passenger automobiles for the model year. The base rebate for each whole mile per gallon above the level at which no base rebate is prescribed shall be determined by multiplying the base

rebate correction factor for the year by the difference between a fraction created by dividing 100,000 by the fuel economy for which the base rebate is to be prescribed, and a fraction created by dividing 100,000 by the average fuel economy standard. No base rebate shall be prescribed which exceeds the maximum base rebate specified in the table for the model year under subsection (b). The Secretary shall prescribe the table each year prior to the beginning of the model year.

"(g) If the average fuel economy standard prescribed under section 502 of the Motor Vehicle Information and Cost Savings Act (15 U.S.C. 2002) applicable to any class of non-passenger automobiles for a model year is higher than the average fuel economy standard for passenger automobiles for that model year, then the base rebate with respect to such class for the model year shall be determined in accordance with a table prescribed for such year by the Secretary. Such a table shall take the same general form as that in subsection (b) except that no base rebate shall be prescribed at or below the level of the average fuel economy standard prescribed for such class of non-passenger automobiles for the model year. The base rebate for each whole mile per gallon above the level at which no base

rebate is prescribed shall be determined by multiplying the base rebate correction factor for the model year by the difference between a fraction created by dividing 100,000 by the fuel economy for which the base rebate is to be prescribed, and a fraction created by dividing 100,000 by the average fuel economy standard. No base rebate shall be prescribed which exceeds the base rebate specified in the table for the model year under subsection (b). The Secretary shall prescribe the table each year prior to the beginning of the model year.

"(h) If the average fuel economy standard prescribed under section 502 of the Motor Vehicle Information and Cost Savings Act (15 U.S.C. 2002) applicable to any class of automobiles is below the average fuel economy standard for passenger automobiles for the model year, then the base rebate with respect to such class for the model year shall be determined in the same manner as that for passenger automobiles for the model year.

"(i) Definitions and Special Rules. For purposes of this section--

"(1) Automobile, etc.--The terms 'automobile', 'passenger automobile', 'fuel economy', 'model type', 'average fuel economy standard' and 'model year' have

the meaning prescribed by section 501 of the Motor Vehicle Information and Cost Savings Act (15 U.S.C. 2001).

"(2) Electric automobile.--The term 'electric automobile' means an automobile which is powered primarily by an electric motor drawing current from rechargeable storage batteries or other portable sources of electric current.

"(3) Manufacturer.--The term 'manufacturer' has the meaning prescribed by section 4064(c)(2).

"(4) Base rebate correction factor.--The term 'base rebate correction factor' for each model year has the same meaning as the term 'tax correction factor' used in section 1201 4064(c)(3).

"(j) Lease Considered Sale.--For purposes of this section, the initial lease of an automobile by the manufacturer shall be considered a sale. Any lease other than an initial lease shall not be considered a sale.

"(k) Credit on Returns.--Any manufacturer entitled to a payment under this section may, instead of filing a claim for refund, take credit therefor against taxes imposed by chapter 31 or 32 due on any subsequent return.

"(1) Disallowance of Payment or Credit.--Notwithstanding any other provisions of this section:

"(1) No amount shall be paid or credited under this section with respect to the sale of any automobile by the manufacturer for export (by any person).

"(2) No amount shall be paid or credited under this section with respect to the sale by the manufacturer of any automobile after May 1, 1977, unless such manufacturer has paid such amount to the ultimate purchaser of such automobile and has in his possession evidence of such payment as may be required by regulations prescribed by the Secretary under this subsection."

(b) Clerical Amendment.--The table of sections for subchapter B of chapter 65 is amended by adding at the end thereof the following new item:

"Sec. 6429. FUEL EFFICIENCY REBATE."

SEC. 1203. FUEL INEFFICIENCY TAX RECEIPTS AND REBATE PAYMENTS

(a) The Treasury of the United States shall record as receipts to the General Fund amounts collected under section 4064 of the Internal Revenue Code of 1954 (relating to fuel inefficiency tax), reduced by the amounts credited or refunded as overpayments of amounts so collected.

(b) The Treasury of the United States shall record as outlays the amounts required to be paid by section 6429 of the Internal Revenue Code of 1954 (relating to fuel efficiency rebates).

(c) Appropriation Authorization.--There are authorized to be appropriated such amounts as may be necessary for payment of the fuel efficiency rebates.

SEC. 1204. EFFECTIVE DATES.

The amendments made by Sections 1201 and 1202 shall apply in the case of sales by the manufacturer after the date of enactment of this Act, except as otherwise specified therein.

APPENDIX B

SUBCHAPTER V, PART A
MOTOR VEHICLES INFORMATION AND COST SAVINGS ACT,
AS AMENDED BY
THE ENERGY POLICY AND CONSERVATION ACT

(15 USC 2001-2012)

person from whom or from whose premises the property was taken and to the applicant for the warrant.

(4) The judge or magistrate who has issued a warrant under this section shall attach to the warrant a copy of the return and all papers filed in connection therewith and shall file them with the clerk of the district court of the United States for the judicial district in which the inspection was made.

Pub.L. 92-513, Title IV, § 415, as added Pub.L. 94-364, Title IV, § 408(2), July 14, 1976, 90 Stat. 987.

Legislative History. For legislative history and purpose of Pub.L. 94-364, see 1976 U.S.Code Cong. and Adm.News, p. 1718.

§ 1990f. Compliance with inspection and investigation requirements

No person shall fail to comply with the requirements of section 1990d of this title to maintain records, make reports, provide information, permit access to or copying of records, permit entry or inspection, or permit impounding.

Pub.L. 92-513, Title IV, § 416, as added Pub.L. 94-364, Title IV, § 408(2), July 14, 1976, 90 Stat. 988.

Legislative History. For legislative history and purpose of Pub.L. 94-364, see 1976 U.S.Code Cong. and Adm.News, p. 1718.

§ 1990g. Authorization of appropriations

There are authorized to be appropriated to carry out this subchapter $450,000 for the fiscal year ending June 30, 1976; $100,000 for the period beginning July 1, 1976, and ending September 30, 1976; $650,000 for the fiscal year ending September 30, 1977; and $562,000 for the fiscal year ending September 30, 1978.

Pub.L. 92-513, Title IV, § 417, as added Pub.L. 94-364, Title IV, § 408(2), July 14, 1976, 90 Stat. 989.

Legislative History. For legislative history and purpose of Pub.L. 94-364, see 1976 U.S.Code Cong. and Adm.News, p. 1718.

§ 1991. State odometer requirements

Section 411 of Pub.L. 92-513 was renumbered 418 by Pub.L. 94-364, § 408(1), July 14, 1976, 90 Stat. 984.

Effective Date. Section effective 90 calendar days following Oct. 20, 1972, see section 419 of Pub.L. 92-513, set out as a note under section 1981 of this title.

SUBCHAPTER V—IMPROVING AUTOMOTIVE EFFICIENCY [NEW]

PART A [1]—AUTOMOTIVE FUEL ECONOMY

[1] So in original. There are no other parts in this subchapter.

§ 2001. Definitions

For purposes of this part:

(1) The term "automobile" means any 4-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

(A) which is rated at 6,000 lbs. gross vehicle weight or less, or

(B) which—

(i) is rated at more than 6,000 lbs. gross vehicle weight but less than 10,000 lbs. gross vehicle weight,

(ii) is a type of vehicle for which the Secretary determines, by rule, average fuel economy standards under this part are feasible, and

(iii) is a type of vehicle for which the Secretary determines, by rule, average fuel economy standards will result in significant energy conservation, or is a type of vehicle which the Secretary determines is substantially used for the same purposes as vehicles described in subparagraph (A) of this paragraph.

The Secretary may prescribe such rules as may be necessary to implement this paragraph.

(2) The term "passenger automobile" means any automobile (other than an automobile capable of off-highway operation) which the Secretary determines by rule is manufactured primarily for use in the transportation of not more than 10 individuals.

(3) The term "automobile capable of off-highway operation" means any automobile which the Secretary determines by rule—

(A) has a significant feature (other than 4-wheel drive) which is designed to equip such automobile for off-highway operation, and

(B) either—

(i) is a 4-wheel drive automobile, or

(ii) is rated at more than 6,000 pounds gross vehicle weight.

(4) The term "average fuel economy" means average fuel economy, as determined under section 2003 of this title.

(5) The term "fuel" means gasoline and diesel oil. The Secretary may, by rule, include any other liquid fuel or any gaseous fuel within the meaning of the term "fuel" if he determines that such inclusion is consistent with the need of the Nation to conserve energy.

(6) The term "fuel economy" means the average number of miles traveled by an automobile per gallon of gasoline (or equivalent amount of other fuel) consumed, as determined by the EPA Administrator in accordance with procedures established under section 2003(d) of this title.

(7) The term "average fuel economy standard" means a performance standard which specifies a minimum level of average fuel economy which is applicable to a manufacturer in a model year.

(8) The term "manufacturer" means any person engaged in the business of manufacturing automobiles. The Secretary shall prescribe rules for determining, in cases where more than one person is the manufacturer of an automobile, which person is to be treated as the manufacturer of such automobile for purposes of this part.

(9) The term "manufacturer" (except for purposes of section 2002(c) of this title) means to produce or assemble in the customs territory of the United States, or to import.

(10) The term "import" means to import into the customs territory of the United States.

(11) The term "model type" means a particular class of automobile as determined, by rule, by the EPA Administrator, after consultation and coordination with the Secretary.

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

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

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

Pub.L. 92-513, Title V, § 501, as added Pub.L. 94-163, Title III, § 301, Dec. 22, 1975, 89 Stat. 901.

Legislative History. For legislative history and purpose of Pub.L. 94-163, see 1975 U.S.Code Cong. and Adm.News, p. 1762.

§ 2002. Average fuel economy standards

(a)(1) Except as otherwise provided in paragraph (4) or in subsection (c) or (d) of this section, the average fuel economy for 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 established for such model year under the following table:

Model year:	Average fuel economy standard (in miles per gallon)
1978	18.0.
1979	19.0.
1980	20.0.
1981	Determined by Secretary under paragraph (3) of this subsection.
1982	Determined by Secretary under paragraph (3) of this subsection.
1983	Determined by Secretary under paragraph (3) of this subsection.
1984	Determined by Secretary under paragraph (3) of this subsection.
1985 and thereafter	27.5.

(2) Not later than January 15 of each year, beginning in 1977, the Secretary shall transmit to each House of Congress, and publish in the Federal Register, a review of average fuel economy standards under this part. The review required to be transmitted not later than January 15, 1979, shall include a comprehensive analysis of the program required by this part. Such analysis shall include an assessment of the ability of manufacturers to meet the average fuel economy standard for model year 1985 as specified in paragraph (1) of this subsection, and any legislative recommendations the Secretary or the EPA Administrator may have for improving the program required by this part.

(3) Not later than July 1, 1977, the Secretary shall prescribe, by rule, average fuel economy standards for passenger automobiles manufactured in each of the model years 1981 through 1984. Any such standard shall apply to each manufacturer (except as provided in subsection (c) of this section), and shall be set for each such model year at a level which the Secretary determines (A) is the maximum feasible average fuel economy level, and (B) will result in steady progress toward meeting the average fuel economy standard established by or pursuant to this subsection for model year 1985.

(4) The Secretary may, by rule, amend the average fuel economy standard specified in paragraph (1) for model year 1985, or for any subsequent model year, to a level which he determines is the maximum feasible average fuel economy level for such model year, except that any amendment which has the effect of increasing an average fuel economy standard to a level in excess of 27.5 miles per gallon, or of decreasing any such standard to a level below 26.0 miles per gallon, shall be submitted to the Congress in accordance with section 6421 of Title 42, and shall not take effect if either House of the Congress disapproves such amendment in accordance with the procedures specified in such section.

(5) For purposes of considering any modification which is submitted to the Congress under paragraph (4), the 5 calendar days specified in section 6421(f)(4)(A) of Title 42 shall be lengthened to 20 calendar days, and the 15 calendar days specified in section 6421(c) and (d) of Title 42 shall be lengthened to 60 calendar days.

(b) The Secretary shall, by rule, prescribe average fuel economy standards for automobiles which are not passenger automobiles and which are manufactured by any manufacturer in each model year which begins more than 30 months after December 22, 1975. Such rules may provide for separate standards for different classes of such automobiles (as determined by the Secretary), and shall be set at a level which the Secretary determines is the maximum feasible average fuel economy level which such manufacturers are able to achieve in each model year to which this subsection applies. Any standard applicable to a model year

under this subsection shall be prescribed at least 18 months prior to the beginning of such model year.

(c) On application of a manufacturer who manufactured (whether or not in the United States) fewer than 10,000 passenger 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 subsection (a) of this section. An application for such an exemption shall be submitted to the Secretary, and shall contain such information as the Secretary may require by rule. Such exemption may only be granted if the Secretary determines that the average fuel economy standard otherwise applicable under subsection (a) of this section is more stringent than the maximum feasible average fuel economy level which such manufacturer can attain. The Secretary may not issue exemptions with respect to a model year unless he establishes, by rule, alternative average fuel economy standards for passenger automobiles manufactured by manufacturers which receive exemptions under this subsection. Such standards may be established for an individual manufacturer, for all automobiles to which this subsection applies, or for such classes of such automobiles as the Secretary may define by rule. Each such standard shall be set at a level which the Secretary determines is the maximum feasible average fuel economy level for the manufacturers to which the standard applies. An exemption under this subsection shall apply to a model year only if the manufacturer manufacturers (whether or not in the United States) fewer than 10,000 passenger automobiles in such model year.

(d)(1) Any manufacturer may apply to the Secretary for modification of an average fuel economy standard applicable under subsection (a) of this section to such manufacturer for model year 1978, 1979, or 1980. Such application shall contain such information as the Secretary may require by rule, and shall be submitted to the Secretary within 24 months before the beginning of the model year for which such modification is requested.

(2)(A) If a manufacturer demonstrates and the Secretary finds that—

(i) a Federal standards fuel economy reduction is likely to exist for such manufacturer for the model year to which the application relates, and

(ii) such manufacturer applied a reasonably selected technology,

the Secretary shall by rule, reduce the average fuel economy standard applicable under subsection (a) of this section to such manufacturer by the amount of such manufacturer's Federal standards fuel economy reduction, rounded off to the nearest one-tenth mile per gallon (in accordance with rules of the Secretary). To the maximum extent practicable, prior to making a finding under this paragraph with respect to an application, the Secretary shall request, and the EPA Administrator shall supply, test results collected pursuant to section 2003(d) of this title for all automobiles covered by such application.

(B)(i) If the Secretary does not find that a Federal standards fuel economy reduction is likely to exist for a manufacturer who filed an application under paragraph (1), he shall deny the application of such manufacturer.

(ii) If the Secretary—

(I) finds that a Federal standards fuel economy reduction is likely to exist for a manufacturer who filed an application under paragraph (1), and

(II) does not find that such manufacturer applied a reasonably selected technology,

the average fuel economy standard applicable under subsection (a) of this section to such manufacturer shall, by rule, be reduced by an amount equal to the Federal standards fuel economy reduction which the Secretary finds would have resulted from the application of a reasonably selected technology.

(3) For purposes of this subsection:

(A) The term "reasonably selected technology" means a technology which the Secretary determines it was reasonable for a manufacturer to select, considering (i) the Nation's need to improve the fuel economy of its automobiles, and (ii) the energy savings, economic costs, and lead-time requirements associated with alternative technologies practicably available to such manufacturer.

(B) The term "Federal standards fuel economy reduction" means the sum of the applicable fuel economy reductions determined under subparagraph (C).

(C) The term "applicable fuel economy reduction" means a number of miles per gallon equal to—

(i) the reduction in a manufacturer's average fuel economy in a model year which results from the application of a category of Federal standards applicable to such model year, and which would not have occurred had Federal standards of such category applicable to model year 1975 remained the only standards of such category in effect, minus

(ii) 0.5 mile per gallon.

(D) Each of the following is a category of Federal standards;

(i) Emissions standards under section 1857f–1 of Title 42, and emissions standards applicable by reason of section 1857f–6a of Title 42.

(ii) Motor vehicle safety standards under the National Traffic and Motor Vehicle Safety Act of 1966.

(iii) Noise emission standards under section 4905 of Title 42.

(iv) Property loss reduction standards under subchapter I of this chapter.

(E) In making the determination under this subparagraph, the Secretary (in accordance with such methods as he shall prescribe by rule) shall assume a production mix for such manufacturer which would have achieved the average fuel economy standard for such model year had standards described in subparagraph (D) applicable to model year 1975 remained the only standards in effect.

(4) The Secretary may, for the purposes of conducting a proceeding under this subsection, consolidate one or more applications filed under this subsection.

(e) For purposes of this section, in determining maximum feasible average fuel economy, the Secretary shall consider—

(1) technological feasibility;

(2) economic practicability;

(3) the effect of other Federal motor vehicle standards on fuel economy; and

(4) the need of the Nation to conserve energy.

(f)(1) The Secretary may, by rule, from time to time, amend any average fuel economy standard prescribed under subsection (a)(3), (b), or (c) of this section, so long as such standard, as amended, meets the requirements of subsection (a)(3), (b), or (c) of this section, as the case may be.

(2) Any amendment prescribed under this section which has the effect of making any average fuel economy standard more stringent shall be—

(A) promulgated, and

(B) if required by paragraph (4) of subsection (a) of this section, submitted to the Congress,

at least 18 months prior to the beginning of the model year to which such amendment will apply.

(g) Proceedings under subsection (a)(4) or (d) of this section shall be conducted in accordance with section 553 of Title 5, except that in-

terested persons shall be entitled to make oral as well as written presentations. A transcript shall be taken of any oral presentations.

Pub.L. 92–513, Title V, § 502, as added Pub.L. 94–163, Title III, § 301, Dec. 22, 1975, 89 Stat. 902.

References in Text. The National Traffic and Motor Vehicle Safety Act of 1966, referred to in subsec. (d)(3)(D)(ii), is classified to section 1381 et seq. of this title.

Legislative History. For legislative history and purpose of Pub.L. 94–163, see 1975 U.S.Code Cong. and Adm.News, p. 1762.

§ 2003. Calculation of average fuel economy

(a)(1) Average fuel economy for purposes of section 2002(a) and (c) of this title shall be calculated by the EPA Administrator by dividing—

(A) the total number of passenger automobiles manufactured in a given model year by a manufacturer, 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 by such manufacturer in such model year, by

(ii) the fuel economy measured for such model type.

(2) Average fuel economy for purposes of section 2002(b) of this title shall be calculated in accordance with rules of the EPA Administrator.

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

(A) Passenger automobiles which are domestically manufactured by such manufacturer (plus, in the case of model year 1978 and model year 1979, passenger automobiles which are within the includable base import volume of such manufacturer).

(B) Passenger automobiles which are not domestically manufactured by such manufacturer (and which, in the case of model year 1978 and model year 1979, are not within the includable base import volume of such manufacturer).

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

(2) For purposes of this subsection:

(A) The term "includable base import volume", with respect to any manufacturer in model year 1978 or 1979, as the case may be, is a number of passenger automobiles which is the lesser of—

(i) the manufacturer's base import volume, or

(ii) the number of passenger automobiles calculated by multiplying—

(I) the quotient obtained by dividing such manufacturer's base import volume by such manufacturer's base base [1] production volume, times

(II) the total number of passenger automobiles manufactured by such manufacturer during such model year.

(B) The term "base import volume" means one-half the sum of—

(i) the total number of passenger automobiles which were not domestically manufactured by such manufacturer during model year 1974 and which were imported by such manufacturer during such model year, plus

(ii) 133 percent of the total number of passenger automobiles which were not domestically manufactured by such manufacturer during the first 9 months of model year 1975 and which were imported by such manufacturer during such 9-month period.

93-188 O - 77 - 12

(C) The term "base production volume" means one-half the sum of—

(i) the total number of passenger automobiles manufactured by such manufacturer during model year 1974, plus

(ii) 133 percent of the total number of passenger automobiles manufactured by such manufacturer during the first 9 months of model year 1975.

(D) For purposes of subparagraphs (B) and (C) of this paragraph any passenger automobile imported during model year 1976, but prior to July 1, 1975, shall be deemed to have been manufactured (and imported) during the first 9 months of model year 1975.

(E) An automobile shall be considered domestically manufactured in any model year 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 following the end of such model year. The EPA Administrator may prescribe rules for purposes of carrying out this subparagraph.

(F) The fuel economy of each passenger automobile which is imported by a manufacturer in model year 1978 or 1979, as the case may be, and which is not domestically manufactured by such manufacturer, shall be deemed to be equal to the average fuel economy of all such passenger automobiles.

(c) Any reference in this part to automobiles manufactured by a manufacturer shall be deemed—

(1) to include all automobiles manufactured by persons who control, are controlled by, or are under common control with, such manufacturer; and

(2) to exclude all automobiles manufactured (within the meaning of paragraph (1)) during a model year by such manufacturer which are exported prior to the expiration of 30 days following the end of such model year.

(d)(1) Fuel economy for any model type shall be measured, and average fuel economy of a manufacturer shall be calculated, in accordance with testing and calculation procedures established by the EPA Administrator, by rule. Procedures so established with respect to passenger automobiles (other than for purposes of section 2006 of this title) shall be the procedures utilized by the EPA Administrator for model year 1975 (weighed 55 percent urban cycle, and 45 percent highway cycle), or procedures which yield comparable results. Procedures under this subsection, to the extent practicable, shall require that fuel economy tests be conducted in conjunction with emissions tests conducted under section 1857f–5 of Title 42. The EPA Administrator shall report any measurements of fuel economy and any calculations of average fuel economy to the Secretary.

(2) The EPA Administrator shall, by rule, determine that quantity of any other fuel which is the equivalent of one gallon of gasoline.

(3) Testing and calculation procedures applicable to a model year, and any amendment to such procedures (other than a technical or clerical amendment), shall be promulgated not less than 12 months prior to the model year to which such procedures apply.

(e) For purposes of this part (other than section 2006 of this title), any measurement of fuel economy of a model type, and any calculation of average fuel economy of a manufacturer, shall be rounded off to the nearest one-tenth mile per gallon (in accordance with rules of the EPA Administrator).

(f) The EPA Administrator shall consult and coordinate with the Secretary in carrying out his duties under this section.

Pub.L. 92–513, Title V, § 503, as added Pub.L. 94–163, Title III, § 301, Dec. 22, 1975, 89 Stat. 906.

[1] So in original.

Legislative History. For legislative history and purpose of Pub.L. 94–163, see 1975 U.S.Code Cong. and Adm.News, p. 1762.

§ 2004. Judicial review

(a) Any person who may be adversely affected by any rule prescribed under section 2001, 2002, 2003, or 2006 of this title may, at any time prior to 60 days after such rule is prescribed (or in the case of an amendment submitted to each House of the Congress under section 2002(a)(4) of this title, at any time prior to 60 days after the expiration of the 60-day period specified in section 2002(a)(5) of this title), file a petition in the United States Court of Appeals for the District of Columbia, or for any circuit wherein such person resides or has his 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 written submissions and other materials in the proceeding upon which such rule was based. Upon the filing of such petition, the court shall have jurisdiction to review the rule in accordance with chapter 7 of Title 5 and to grant appropriate relief as provided in such chapter. Findings of the Secretary under section 2002(d) of this title shall be set aside by the court on review unless such findings are supported by substantial evidence.

(b) If the petitioner applies to the court in a proceeding under subsection (a) of this section for leave to make additional submissions, and shows to the satisfaction of the court that such additional submissions are material and that there were reasonable grounds for the failure to make such submissions in the administrative proceeding, the court may orde.' the Secretary or the EPA Administrator, as the case may be, to provide additional opportunity to make such submissions. The Secretary or the EPA Administrator, as the case may be, may modify or set aside the rule involved or prescribe a new rule by reason of the additional submissions, and shall file any such modified or new rule in the court, together with such additional submissions. The court shall thereafter review such new or modified rule.

(c) The judgment of the court affirming or setting aside, in whole or in part, any such 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.

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

Pub.L. 92–513, Title V, § 504, as added Pub.L. 94–163, Title III, § 301, Dec. 22, 1975, 89 Stat. 908.

Legislative History. For legislative history and purpose of Pub.L. 94–163, see 1975 U.S.Code Cong. and Adm.News, p. 1762.

§ 2005. Information and reports

(a)(1) Each manufacturer shall submit a report to the Secretary during the 30-day period preceding the beginning of each model year after model year 1977, and during the 30-day period beginning on the 180th day of each such model year. Each such report shall contain (A) a statement as to whether such manufacturer will comply with average fuel economy standards under section 2002 of this title applicable to the model year for which such report is made; (B) a plan which describes the steps the manufacturer has taken or intends to take in order to comply with such standards; and (C) such other information 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 average fuel economy standards is not sufficient to insure such

compliance, he shall submit a report to the Secretary containing a revised plan which specifies any additional measures which such manufacturer intends to take in order to comply with such standards, and a statement as to whether such revised plan is sufficient to insure such compliance.

(3) The Secretary shall prescribe rules setting forth the form and content of the reports required under paragraphs (1) and (2).

(b)(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, the attendance and testimony of such witnesses and the production of such books, papers, correspondence, memorandums, contracts, agreements, or other records as the Secretary, the EPA Administrator, or such agents deem advisable. The Secretary or the EPA Administrator may require, by general or special orders that any person—

(A) 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 the EPA Administrator under this part, and

(B) provide the Secretary, the EPA Administrator, or their duly designated agents, access to (and for the purpose of examination, the right to copy) any documentary evidence of such person which is relevant to any function of the Secretary or the EPA Administrator under this part.

Such reports and answers shall be made under oath or otherwise, and shall be filed with the Secretary or the EPA Administrator within such reasonable period as either 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 a duly designated agent of either, issued under paragraph (1), issue an order requiring compliance with such subpena or order. Any failure to obey such an order of the court may be treated 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.

(c)(1) Every manufacturer shall establish and maintain such records, make such reports, conduct such tests, and provide such items and information as the Secretary or the EPA Administrator may, by rule, reasonably require to enable the Secretary or the EPA Administrator to carry out their duties under this part and under any rules prescribed pursuant to this part. Such manufacturer shall, upon request of a duly designated agent of the Secretary or the EPA Administrator who presents appropriate credentials, permit such agent, at reasonable times and in a reasonable manner, to enter the premises of such manufacturer to inspect 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 the EPA Administrator may prescribe.

(2) The district courts of the United States may, if a manufacturer refuses to accede to any rule or reasonable request made under paragraph (1), issue an order requiring compliance with such requirement or request. Any failure to obey such an order of the court may be treated by such court as a contempt thereof.

(d)(1) The Secretary and the EPA Administrator shall each disclose any information obtained under this part (other than section 2003(d) of this title) to the public in accordance with section 552 of Title 5 except that information may be withheld from disclosure under subsection (b)(4) of such section only if the Secretary or the EPA Administrator, as

the case may be, determines that such information, if disclosed, would result in significant competitive damage. Any matter described in section 552(b)(4) relevant to any administrative or judicial proceeding under this part may be disclosed in such proceeding.

(2) Measurements and calculations under section 2003(d) of this title shall be made available to the public in accordance with section 552 of Title 5 without regard to subsection (b) of such section.

Pub.L. 92-513, Title V, § 505, as added Pub.L. 94-163, Title III, § 301, Dec. 22, 1975, 89 Stat. 908.

Legislative History. For legislative history and purpose of Pub.L. 94-163, see 1975 U.S.Code Cong. and Adm.News, p. 1762.

§ 2006. Labeling

(a)(1) Except as otherwise provided in paragraph (2), each manufacturer shall cause to be affixed, and each dealer shall cause to be maintained, on each automobile manufactured in any model year after model year 1976, in a prominent place, a label—

(A) indicating—

(i) the fuel economy of such automobile,

(ii) the estimated annual fuel cost associated with the operation of such automobile, and

(iii) the range of fuel economy of comparable automobiles (whether or not manufactured by such manufacturer),

as determined in accordance with rules of the EPA Administrator,

(B) containing a statement that written information (as described in subsection (b)(1) of this section) with respect to the fuel economy of other automobiles manufactured in such model year (whether or not manufactured by such manufacturer) is available from the dealer in order to facilitate comparison among the various model types, and

(C) containing any other information authorized or required by the EPA Administrator which relates to information described in subparagraph (A) or (B).

(2) With respect to automobiles—

(A) for which procedures established in the EPA and FEA Voluntary Fuel Labeling Program for Automobiles exist on December 22, 1975, and

(B) which are manufactured in model year 1976 and at least 90 days after December 22, 1975,

each manufacturer shall cause to be affixed, and each dealer shall cause to be maintained, in a prominent place, a label indicating the fuel economy of such automobile, in accordance with such procedures.

(3) The form and content of the labels required under paragraphs (1) and (2), and the manner in which such labels shall be affixed, shall be prescribed by the EPA Administrator by rule. The EPA Administrator may permit a manufacturer to comply with this paragraph by permitting such manufacturer to disclose the information required under this subsection on the label required by section 1232 of this title.

(b)(1) The EPA Administrator shall compile and prepare a simple and readily understandable booklet containing data on fuel economy of automobiles manufactured in each model year. Such booklet shall also contain information with respect to estimated annual fuel costs, and may contain information with respect to geographical or other differences in estimated annual fuel costs. The Administrator of the Federal Energy Administration shall publish and distribute such booklets.

(2) The EPA Administrator, not later than July 31, 1976, shall prescribe rules requiring dealers to make available to prospective purchasers information compiled by the EPA Administrator under paragraph (1).

(c)(1) A violation of subsection (a) of this section shall be treated as a violation of section 1232 of this title. For purposes of the Federal Trade

Commission Act (other than sections 45(m) and 57a of this title, a violation of subsection (a) of this section shall be treated as an unfair or deceptive act or practice in or affecting commerce.

(2) As used in this section, the term "dealer" has the same meaning as such term has in section 1231(e) of this title except that in applying such term to this section, the term "automobile" has the same meaning as such term has in section 2001(1) of this title.

(d) Any disclosure with respect to fuel economy or estimated annual fuel cost which is required to be made under the provisions of this section shall not create an express or implied warranty under State or Federal law that such fuel economy will be achieved, or that such cost will not be exceeded, under conditions of actual use.

(e) In carrying out his duties under this section, the EPA Administrator shall consult with the Federal Trade Commission, the Secretary, and the Federal Energy Administrator.

Pub.L. 92-513, Title V, § 506, as added Pub.L. 94-163, Title III, § 301, Dec. 22, 1975, 89 Stat. 910.

References in Text. The Federal Trade Commission Act, referred to in subsec. (c)(1), is classified to section 41 et seq. of this title.

Legislative History. For legislative history and purpose of Pub.L. 94-163, see 1975 U.S.Code Cong. and Adm.News, p. 1762.

§ 2007. Unlawful conduct

The following conduct is unlawful:

(1) the failure of any manufacturer to comply with any average fuel economy standard applicable to such manufacturer under section 2002 of this title (other than section 2002(b) of this title),

(2) the failure of any manufacturer to comply with any average fuel economy standard applicable to such manufacturer under section 2002(b) of this title, or

(3) the failure of any person (A) to comply with any provision of this part applicable to such person (other than section 2002, 2006 (a), 2010, or 2011 of this title), or (B) to comply with any standard, rule, or order applicable to such person which is issued pursuant to such a provision.

Pub.L. 92-513, Title V, § 507, as added Pub.L. 94-163, Title III, § 301, Dec. 22, 1975, 89 Stat. 911.

Legislative History. For legislative history and purpose of Pub.L. 94-163, see 1975 U.S.Code Cong. and Adm.News, p. 1762.

§ 2008. Civil penalty

(a)(1) If average fuel economy calculations reported under section 2003(d) of this title indicate that any manufacturer has violated section 2007(1) or (2) of this title, then (unless further measurements of fuel economy, further calculations of average fuel economy, or other information indicates there is no violation of section 2007(1) or (2) of this title) the Secretary shall commence a proceeding under paragraph (2) of this subsection. The results of such further measurements, further calculations, and any such other information, shall be published in the Federal Register.

(2) If, on the record after opportunity for agency hearing, the Secretary determines that such manufacturer has violated section 2007(1) or (2) of this title, or that any person has violated section 2007(3) of this title, the Secretary shall assess the penalties provided for under subsection (b) of this section. Any interested person may participate in any proceeding under this paragraph.

(3)(A)(i) Whenever the average fuel economy of the passenger automobiles manufactured by a manufacturer in a particular model year exceeds an applicable average fuel economy standard established under section 2002(a) or (c) of this title (determined without regard to any

adjustment under section 2002(d) of this title), such manufacturer shall be entitled to a credit, calculated under clause (ii), which shall be—

(I) deducted from the amount of any civil penalty which has been or may be assessed against such manufacturer for a violation of section 2007(1) of this title occurring in the model year immediately prior to the model year in which such manufacturer exceeds such applicable average fuel economy standard, and

(II) to the extent that such credit is not deducted pursuant to subclause (I), deducted from the amount of any civil penalty assessed against such manufacturer for a violation of section 2007(1) of this title occurring in the model year immediately following the model year in which such manufacturer exceeds such applicable average fuel economy standard.

(ii) The amount of credit to which a manufacturer is entitled under clause (i) shall be equal to—

(I) $5 for each tenth of a mile per gallon by which the average fuel economy of the passenger automobiles manufactured by such manufacturer in the model year in which the credit is earned pursuant to clause (i) exceeds the applicable average fuel economy standard established under section 2002(a) or (c) of this title, multiplied by

(II) the total number of passenger automobiles manufactured by such manufacturer during such model year.

(B)(i) Whenever the average fuel economy of a class of automobiles which are not passenger automobiles and which are manufactured by a manufacturer in a particular model year exceeds an average fuel economy standard applicable to automobiles of such class under section 2002(b) of this title, such manufacturer shall be entitled to a credit, calculated under clause (ii), which shall be—

(I) deducted from the amount of any civil penalty which has been or may be assessed against such manufacturer for a violation of section 2007(2) of this title occurring in the model year immediately prior to the model year in which such manufacturer exceeds such applicable average fuel economy standard, and

(II) to the extent that such credit is not deducted pursuant to subclause (I), deducted from the amount of any such civil penalty assessed against such manufacturer for a violation of section 2007(2) of this title occurring in the model year immediately following the model year in which such manufacturer exceeds such applicable average fuel economy standard.

(ii) The amount of credit to which a manufacturer is entitled under clause (i) shall be equal to—

(I) $5 for each tenth of a mile per gallon by which the average fuel economy of the automobiles of such class manufactured by such manufacturer in the model year in which the credit is earned pursuant to clause (i) exceeds the applicable average fuel economy standard established under section 2002(b) of this title, multiplied by

(II) the total number of automobiles of such class manufactured by such manufacturer during such model year.

(C) Whenever a civil penalty has been assessed and collected under this section from a manufacturer who is entitled to a credit under this paragraph with respect to such civil penalty, the Secretary of the Treasury shall refund to such manufacturer the amount of credit to which such manufacturer is so entitled, except that the amount of such refund shall not exceed the amount of the civil penalty so collected.

(D) The Secretary may prescribe rules for purposes of carrying out the provisions of this paragraph.

(b)(1)(A) Any manufacturer whom the Secretary determines under subsection (a) of this section to have violated a provision of section

2007(1) of this title, shall be liable to the United States for a civil penalty equal to (i) $5 for each tenth of a mile per gallon by which the average fuel economy of the passenger automobiles manufactured by such manufacturer during such model year is exceeded by the applicable average fuel economy standard established under section 2002(a) and (c) of this title, multiplied by (ii) the total number of passenger automobiles manufactured by such manufacturer during such model year.

(B) Any manufacturer whom the Secretary determines under subsection (a) to have violated section 2007(2) of this title shall be liable to the United States for a civil penalty equal to (i) $5 for each tenth of a mile per gallon by which the applicable average fuel economy standard exceeds the average fuel economy of automobiles to which such standard applies, and which are manufactured by such manufacturer during the model year in which the violation occurs, multiplied by (ii) the total number of automobiles to which such standard applies and which are manufactured by such manufacturer during such model year.

(2) Any person whom the Secretary determines under subsection (a) to have violated a provision of section 2007(3) of this title 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 shall constitute a separate violation for purposes of this paragraph.

(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 under this subsection against any person, except that any civil penalty assessed for a violation of section 2007(1) or (2) of this title may be so compromised, modified, or remitted only to the extent—

(A) necessary to prevent the insolvency or bankruptcy of such manufacturer,

(B) such manufacturer shows that the violation of section 2007 (1) or (2) of this title resulted from an act of God, a strike, or a fire, or

(C) the Federal Trade Commission has certified that modification of such penalty is necessary to prevent a substantial lessening of competition, as determined under paragraph (4).

The Attorney General shall collect any civil penalty for which a manufacturer is liable under this subsection in a civil action under subsection (c) (2) of this section (unless the manufacturer pays such penalty to the Secretary).

(4) Not later than 30 days after a determination by the Secretary under subsection (a)(2) of this section that a manufacturer has violated section 2007(1) or (2) of this title, such manufacturer may apply to the Federal Trade Commission for a certification under this paragraph. If the manufacturer shows and the Federal Trade Commission determines that modification of the civil penalty for which such manufacturer is otherwise liable is necessary to prevent a substantial lessening of competition in that segment of the automobile industry subject to the standard with respect to which such penalty was assessed, the Commission shall so certify. The certification shall specify the maximum amount that such penalty may be reduced. To the maximum extent practicable, the Commission shall render a decision with respect to an application under this paragraph not later than 90 days after the application is filed with the Commission. A proceeding under this paragraph shall not have the effect of delaying the manufacturer's liability under this section for a civil penalty for more than 90 days after such application is filed, but any payment made before a decision of the Commission under this paragraph becomes final shall be paid to the court in which the penalty is collected, and shall (except as otherwise provided in paragraph (5)), be held by such court, until 90 days after such decision becomes final (at which time it shall be paid into the general fund of the Treasury).

(5) Whenever a civil penalty has been assessed and collected from a manufacturer under this section, and is being held by a court in accordance with paragraph (4), and the Secretary subsequently determines to modify such civil penalty pursuant to paragraph (3)(C) the Secretary shall direct the court to remit the appropriate amount of such penalty to such manufacturer.

(6) A claim of the United States for a civil penalty assessed against a manufacturer under subsection (b)(1) of this section shall, in the case of the bankruptcy or insolvency of such manufacturer, be subordinate to any claim of a creditor of such manufacturer which arises from an extension of credit before the date on which the judgment in any collection action under this section becomes final (without regard to paragraph (4)).

(c)(1) Any interested person may obtain review of a determination (A) of the Secretary pursuant to which a civil penalty has been assessed under subsection (b) of this section, or (B) of the Federal Trade Commission under subsection (b)(4) of this section, in the United States Court of Appeals for the District of Columbia, or for any circuit wherein such person resides or has his principal place of business. Such review may be obtained by filing a notice of appeal in such court within 30 days after the date of such determination, and by simultaneously sending a copy of such notice by certified mail to the Secretary or the Federal Trade Commission, as the case may be. The Secretary or the Commission, as the case may be, shall promptly file in such court a certified copy of the record upon which such determination was made. Any such determination shall be reviewed in accordance with chapter 7 of Title 5.

(2) If any person fails to pay an assessment of a civil penalty after it has become a final and unappealable order, or after the appropriate court of appeals has entered final judgment in favor of the Secretary, the Attorney General shall recover the amount for which the manufacturer is liable in any appropriate district court of the United States. In such action, the validity and appropriateness of the final order imposing the civil penalty shall not be subject to review.

Pub.L. 92–513, Title V, § 508, as added Pub.L. 94–163, Title III, § 301, Dec. 22, 1975, 89 Stat. 911.

Legislative History. For legislative history and purpose of Pub.L. 94–163, see 1975 U.S.Code Cong. and Adm.News, p. 1762.

§ 2009. State laws

(a) Whenever an average fuel economy standard established under this part is in effect, no State or political subdivision of a State shall have authority to adopt or enforce any law or regulation relating to fuel economy standards or average fuel economy standards applicable to automobiles covered by such Federal Standard.

(b) Whenever any requirement under section 2006 of this title is in effect with respect to any automobile, no State or political subdivision of a State shall have authority to adopt or enforce any law or regulation with respect to the disclosure of fuel economy of such automobile, or of fuel cost associated with the operation of such automobile, if such law or regulation is not identical with such requirement.

(c) Nothing in this section shall be construed to prevent any State or political subdivision thereof from establishing requirements with respect to fuel economy of automobiles procured for its own use.

Pub.L. 92–513, Title V, § 509, as added Pub.L. 94–163, Title III, § 301, Dec. 22, 1975, 89 Stat. 914.

Legislative History. For legislative history and purpose of Pub.L. 94–163, see 1975 U.S.Code Cong. and Adm.News, p. 1762.

§ 2010. Use of fuel efficient passenger automobiles by Federal government

(a) The President shall, within 120 days after December 22, 1975, promulgate rules which shall require that all passenger automobiles ac-

quired by all executive agencies in each fiscal year which begins after December 22, 1975, achieve a fleet average fuel economy for such year not less than—

(1) 18 miles per gallon, or

(2) the average fuel economy standard applicable under section 2002(a) of this title for the model year which includes January 1 of such fiscal year,

whichever is greater.

(b) As used in this section:

(1) The term "fleet average fuel economy" means (A) the total number of passenger automobiles acquired in a fiscal year to which this section applies by all executive agencies (excluding passenger automobiles designed to perform combat related missions for the Armed Forces or designed to be used in law enforcement work or emergency rescue work), divided by (B) a sum of terms, each term of which is a fraction created by dividing—

(i) the number of passenger automobiles so acquired of a given model type, by

(ii) the fuel economy of such model type.

(2) The term "executive agency" has the same meaning as such term has for purposes of section 105 of Title 5.

(3) The term "acquired" means leased for a period of 60 continuous days or more, or purchased.

Pub.L. 92-513, Title V, § 510, as added Pub.L. 94-163, Title III, § 301, Dec. 22, 1975, 89 Stat. 915.

Delegation of Functions. Functions of the President under this section delegated to the Administrator of General Services, see section 1(a) of Ex.Ord.No. 11912, Apr. 13, 1976, 41 F.R. 15825, set out as a note under section 6201 of Title 42, The Public Health and Welfare.

Legislative History. For legislative history and purpose of Pub.L. 94-163, see 1975 U.S.Code Cong. and Adm.News, p. 1762.

§ 2011. Retrofit devices

(a) The Federal Trade Commission shall establish a program for systematically examining fuel economy representations made with respect to retrofit devices. Whenever the Commission has reason to believe that any such representation may be inaccurate, it shall request the EPA Administrator to evaluate, in accordance with subsection (b) of this section, the retrofit device with respect to which such representation was made.

(b)(1) Upon application of any manufacturer of a retrofit device (or prototype thereof), upon the request of the Federal Trade Commission pursuant to subsection (a) of this section, or upon his own motion, the EPA Administrator shall evaluate, in accordance with rules prescribed under subsection (d) of this section, any retrofit device to determine whether the retrofit device increases fuel economy and to determine whether the representations (if any) made with respect to such retrofit device are accurate.

(2) If under paragraph (1) the EPA Administrator tests, or causes to be tested, any retrofit device upon the application of a manufacturer of such device, such manufacturer shall supply, at his own expense, one or more samples of such device to the Administrator and shall be liable for the costs of testing which are incurred by the Administrator. The procedures for testing retrofit devices so supplied may include a requirement for preliminary testing by a qualified independent testing laboratory, at the expense of the manufacturer of such device.

(c) The EPA Administrator shall publish in the Federal Register a summary of the results of all tests conducted under this section, together with the EPA Administrator's conclusions as to—

(1) the effect of any retrofit device on fuel economy;

(2) the effect of any such device on emissions of air pollutants; and

(3) any other information which the Administrator determines to be relevant in evaluating such device.

Such summary and conclusions shall also be submitted to the Secretary and the Federal Trade Commission.

(d) Within 180 days after December 22, 1975, the EPA Administrator shall, by rule, establish—

(1) testing and other procedures for evaluating the extent to which retrofit devices affect fuel economy and emissions of air pollutants, and

(2) criteria for evaluating the accuracy of fuel economy representations made with respect to retrofit devices.

(e) For purposes of this section the term "retrofit device" means any component, equipment, or other device—

(1) which is designed to be installed in or on an automobile (as an addition to, as a replacement for, or through alteration or modification of, any original component, equipment, or other device); and

(2) which any manufacturer, dealer, or distributor of such device represents will provide higher fuel economy than would have resulted with the automobile as originally equipped,

as determined under rules of the Administrator. Such term also includes a fuel additive for use in an automobile.

Pub.L. 92–513, Title V, § 511, as added Pub.L. 94–163, Title III, § 301, Dec. 22, 1975, 89 Stat. 915.

Legislative History. For legislative history and purpose of Pub.L. 94–163, see 1975 U.S.Code Cong. and Adm.News, p. 1762.

§ 2012. Reports to Congress

(a) Within 180 days after December 22, 1975, the Secretary shall prepare and submit to the Congress and the President a comprehensive report setting forth findings and containing conclusions and recommendations with respect to (1) a requirement that each new automobile be equipped with a fuel flow instrument reading directly in miles per gallon, and (2) the most feasible means of equipping used automobiles with such instruments. Such report shall include an examination of the effectiveness of such instruments in promoting voluntary reductions in fuel consumption, the cost of such instruments, means of encouraging automobile purchasers to voluntarily purchase automobiles equipped with such instruments, and any other factor bearing on the cost and effectiveness of such instruments and their use.

(b)(1) Within 180 days after December 22, 1975, the Secretary shall prepare and submit to the Congress and the President a comprehensive report setting forth findings and containing conclusions and recommendations with respect to whether or not electric vehicles and other vehicles not consuming fuel (as defined in the first sentence of section 2001(5) of this title) should be covered by this part. Such report shall include an examination of the extent to which any such vehicle should be included under the provisions of this part, the manner in which energy requirements of such vehicles may be compared with energy requirements of fuel-consuming vehicles, the extent to which inclusion of such vehicles would stimulate their production and introduction into commerce, and any recommendations for legislative action.

(2) As used in this subsection, the term "electric vehicle" means a vehicle powered primarily by an electric motor drawing current from rechargeable batteries, fuel cells, or other portable sources of electrical current.

Pub.L. 92–513, Title V, § 512, as added Pub.L. 94–163, Title III, § 301, Dec. 22, 1975, 89 Stat. 916.

Legislative History. For legislative history and purpose of Pub.L. 94–163, see 1975 U.S.Code Cong. and Adm.News, p. 1762.

APPENDIX C

ADDITIONAL LAWS AND REGULATIONS AFFECTING FUEL ECONOMY

Clean Air Requirements

Motor vehicle emission standards

Since the mid-1950's the Federal Government has become increasingly involved in the study and regulation of motor-vehicle exhaust emissions. Several laws were enacted authorizing research into pollutants from mobile sources, the most important being the Clean Air Act of 1963. 1/ In that act, the Secretary of Health, Education, and Welfare is required "to encourage continued efforts on the parts of the automotive and fuel industries to develop devices and fuels to prevent pollutants from being discharged from the exhaust of automotive vehicles". 2/ The Clean Air Act was amended in 1965 by the Motor Vehicles Air Pollution Control Act 3/ to require that the Secretary prescribe practicable standards applicable to the emissions of substances from new motor vehicles or new motor-vehicle engines. Under the amendments to the Clean Air Act provided by the Air Quality Act of 1967 4/ Congress preempted the field of air pollution from motor vehicles. However, the Secretary could grant an exemption to any state which for compelling circumstances wished to establish standards more stringent than the Federal standards. The functions of the Secretary of HEW, as vested in him by these acts, were transferred to the Administrator of the Environmental Protection Agency in 1970. 5/

The first laws calling for the achievement of specified reductions in auto emissions were part of the Clean Air Act Amendments of 1970. 6/

1/ Pub. L. No. 86-206; 77 Stat. 392 (1963), amending the Public Law No. 159 of July 14, 1955, c. 360; 42 USC 1857 et seq.

2/ 1963 U.S. Code Cong. and Admin. News, p. 1280.

3/ Pub. L. No. 89-272; 79 Stat. 992 (1965).

4/ Pub. L. No. 90-148; 81 Stat. 485 (1967).

5/ Reorg. Plan No. 3 of 1970, § 2(a)(3), eff. Dec. 2, 1970, 35 F.R. 15623, 84 Stat. 2086.

6/ Pub. L. No. 91-604; 84 Stat. 1676 (1970).

These amendments contained provisions requiring that by 1975 the auto industry achieve a 90-percent reduction over the 1970 emission levels of carbon monoxide (CO) and hydrocarbons (HC) for their new light-duty vehicles and engines (including passenger automobiles). Using 1971 as the base model year, the auto manufacturers were also called on achieve a 90-percent reduction for oxides of nitrogen (NOx) emissions by model year 1976. These reductions would bring the emission levels down from an average precontrol level of 8.7 grams per mile (gpm) HC, 87 gpm CO, and 3.5 gpm NOx to 0.41 gpm HC, 3.4 gpm CO and 0.4 gpm NOx.

The Administrator of the EPA is given the duty of establishing interim emission standards with a view to obtaining the required 90-percent reduction by the specified dates. In 1974 these compliance dates were deferred pursuant to the 1974 Amendments to the Clean Air Act, 1/ which call for compliance with the CO and HC standards by model year 1977. These 1974 amendments also establish a maximum NOx emission standard of 2.0 gpm for the 1977 model automobiles, delaying the previous statutory standard of 0.4 gpm NOx until the 1978 model year. On March 5, 1975, the Administrator of the EPA handed down a 1-year suspension of the compliance dates for HC and CO emissions, thereby delaying them to the 1978 model year. This administrative action, which was in accordance with § 202(b)(5)(A) of the Clean Air Act, as amended (42 USC 1875f-1(b)(5)(a)), was taken because of the concern over the sulfuric acid emissions from catalysts equipped with an air pump. At the time of the decision this was the only technology available which would meet the emission levels called for.

1/ Pub. L. No. 93-319, § 5; 88 Stat. 258 (1974).

As previously stated, the Administrator may waive the application of the standards for any State which adopts more stringent fuel emission standards than those of the Federal Government (42 USC 1857f-6a); this has been the case for the State of California. The following tabulation, taken from an EPA fact sheet, "Motor Vehicle Air Pollution Control", gives a summary of past, present, and potential Federal auto emission standards and includes those for California, as established under present law.

Emission standards for automobiles (grams per mile) 1/

Item	HC	CO	NOx
Average precontrol emissions	8.7	87	3.5
1970-71	4.1	34	5.0 2/
1972	3.0	28	5.0 2/
1973-74	3.0	28	3.1
1975 (Federal)	1.5	15	3.1
(California)	0.9	9	2.0
1977 (Federal)	1.5	15	2.0
(California)	0.41	9	1.5
Ultimate Clean Air Act Requirements 3/	0.41	3.4	0.4

1/ All values expressed in terms of the 1975 Federal Emission Test Procedure.

2/ There was no NOx standard until 1973. NOx emissions increased due to the methods chosen by automakers to meet the CO and HC standards.

3/ These emission levels were established as to be those meeting the 90-percent reduction required by the Clean Air Act Amendments of 1970, Pub. L. No. 86-493; 77 Stat. 392 (1963). The compliance date as set by the EPA Administrator is 1978 for HC and CO. Under the 1974 Clean Air Act Amendments compliance to the 0.4 gpm NOx standard is also to be reached by 1978.

Complete information on the emission standards and how cars are tested to assure that they meet these standards is contained in the Code of Federal Regulations (45 C.F.R. 85).

Pending Legislation

At the time of this writing, legislation is pending before Congress to further alter the required emission levels and compliance dates. The alternative Federal emission standards as would be set by the Senate, House and administration proposals are shown in the following tabulation:

Emission Standards for Automobiles
(grams per mile)

Model year	HC	CO	NOx	
Senate (S. 252)				
1975	1.5	15	3.1	
1977	1.5	15	2.0	
1980	0.41	3.4	1.0	(0.4-research objective)
House (H.R. 6161)				
1975	1.5	15	3.1	
1977	1.5	15	2.0	
1980	.41	9	2.0	
1982	.41	9	1.0	
Administration				
1975	1.5	15	3.1	
1977	1.5	15	2.0	
1979	0.41	9	2.0	
1981	0.41	3.4	1.0	
1983	0.41	3.4	(0.4-with EPA finding)	

As passed by the Senate, S. 252 would continue the 1975 model year emission standards for HC and CO through model year 1979. NOx standards would be set at 2.0 gpm NOx for model years 1977, 1978, and 1979. Thereafter, the standard would be 1.0 gpm NOx except for a light-duty vehicle manufactured during model year 1980 or 1981 (1) " . . . that uses either an innovative engine system or emission control technology not involving a

precious metal catalyst . . ." or (2) that is produced by a manufacturer of less than 300,000 vehicles a year which must depend on outside sources for the emission control technology to meet the established standards (sec. 23, S. 252). For light-duty vehicles falling within these categories the NOx emissions cannot exceed 2.0 gpm.

Under S. 252 those manufacturers of more than 3 percent of the automobiles in the world market would be obligated in 1979 to meet the 1980 1.0 gpm NOx standard for 10 percent of their fleets. The Clean Air Act's ultimate 90-percent reduction of oxides of nitrogen, i.e., 0.4 gpm NOx, is considered to be a research objective. No later than model year 1978 and for each model year thereafter, each manufacturer representing more than 0.5 percent of sales of light-duty motor vehicles must supply demonstrator models which meet this research objective to the EPA Administrator. These demonstrator models are to (1) encourage the development of the fuel-efficient technology for meeting the emission standards, (2) assure the capability of the manufacturers to produce such a vehicle, and (3) " . . . assure the utilization of optimum engine, fuel and emission standards. . . ." (sec. 25, S. 252).

The House-passed version of the 1977 Amendments to the Clean Air Act (H.R. 6161--the so-called Dingell/Broyhill Bill) would continue the HC and CO 1975 standards through model year 1979. In 1980 the industry would be required to achieve the 90-percent reduction of HC. As for NOx, the 1977-81 model year levels would be 2.0 gpm. In the subsequent model years the standard would lower to 1.0

gpm NOx. A manufacturer may ask for a revision of these standards for those vehicles to be manufactured during or after the 1983 model year. The revision may be made if upon review the Administrator finds that (1) the manufacturer lacks the necessary control technology, (2) the cost of compliance is prohibitive, or (3) the compliance would have a negative effect upon energy conservation. However, such a revision could not be made if it would endanger the public health nor may it set the NOx standards above 2.0 gpm. As in S. 252, a waiver could be given for innovative power train technology which would result in significant energy savings. Such a waiver could not result in a NOx standard higher than 2.0 gpm.

H.R. 6161 would also require that the Administrator of the EPA, the Administrator of the Federal Energy Administration (FEA) and the Secretary of Transportation submit separate reports to Congress on the effect, if any, of established emission standards on fuel consumption. The Administrator of the EPA would also be required to report to Congress by June 30, 1980, on whether or not it is to the benefit of the public health that the NOx standard be lowered below the level called for in the bill.

The Administration had proposed a 1979 model year standard of 0.41 gpm HC, 9.0 gpm CO, and 2.0 gpm NOx. For the 1981 model year these standards would be lowered to 3.4 gpm CO and 1.0 gpm NOx. In order to protect the public health the Administration believes that the ultimate 0.4 NOx standard is a necessity. However, according to the EPA Administrator, health

data is not presently firm enough to warrant this level of control. 1/ If further study shows that the reduction is necessary, the Administrator of the EPA wishes to be given the authority to establish the 0.4 NOx standard for model year 1983. If an engine cannot meet the 0.4 gpm NOx standards by 1983 the Administrator supports placing a penalty charge upon the vehicle "equal to the economic value of not complying with the more stringent standard." 2/

1/ 1/ "Testimony of Douglas M. Castle, Administrator, the U.S. Environmental Protection Agency, to the Subcommittee on Health and Environment, Committee on Interstate and Foreign Commerce," April 28, 1977, p. 12.
2/ Id., p. 14.

Conflicts with fuel economy standards

One of the major questions surrounding the establishment of emission standards has been the possible effect of those standards upon fuel economy; at the same time that the auto manufacturers are being required to meet higher fuel economy standards they are also being forced to meet more stringent emission standards, and the latter can have and have had a negative effect on the former. Since the establishment of average fuel economy standards pursuant to the EPCA, this issue has been and will no doubt continue to be of great importance.

According to studies on automotive fuel economy conducted by the EPA, the average loss in fuel economy for 1974 model year vehicles was estimated to be about 12 percent in comparison with those vehicles with no emission controls. However, the auto manufacturers were able to recoup this loss by the introduction of the catalytic converter in 1975. EPA statistics show that 1975 vehicles had an average fuel economy improvement of 13 percent over 1973-74 vehicles. The question remains, though, whether or not the automakers can achieve the future standards while also attempting to achieve the EPCA requirements.

In testimony given before the House Subcommittee on Health and Environment, the EPA Administrator stated that

> with adequate lead-time any of [the emission standards proposed by the administration] should be met without incurring fuel economy penalties. There may be a small temporary fuel penalty in 1979 and 1981 if the manufacturers are initially unable to maximize fuel economy performance of the new controls to be imposed in those years. 1/

1/ "Testimony of Douglas M. Castle," p. 16.

In the public hearings on automotive fuel economy standards held on March 22, 23, and 24, 1977, before the Department of Transportation and the National Highway Traffic Safety Administration, representatives of the Big Four testified to the manufacturers' ability to meet the EPCA's fuel economy standards and achieve the required fuel emission reductions. Chrysler Corporation stated that if 1975 emission standards were continued through 1985 they could only build, and sell, in 1985 a fleet of cars averaging approximately 26 mpg. At .41 gpm HC, 9.0 gpm CO and 2.0 gpm NOx (the standards set by H.R. 6161) the projected fuel economy of that same fleet would drop to 24 mpg. If the NOx was dropped to 1.0 gpm the fleet average would drop to 22 to 23 mpg. New technology used to achieve fuel emission standards is never 100-percent efficient. Therefore, according to Chrysler, it must alter the engine in order to achieve the emission standard, and a loss of fuel economy results. At present, Chrysler does not foresee any major technology breakthroughs which would allow it to meet the emission standards and at the same time, reach the fuel economy standards as established.

When asked whether or not it could meet the fuel standards by incorporating a certain number of technology improvements, Ford Motor Company responded that the possibility of meeting the fuel efficiency standards is predicated on its capability of meeting fuel emission standards, and Ford does not believe that it will be able to meet the emission standards as they are presently set.

General Motors Corporation stated that with the fuel emission standards for 1984-85 being set at 0.41 gpm HC, 9.0 gpm CO, and 1.0 gpm NOx, it expects a 5-percent fuel economy loss. At 2.0 NOx it hopes that there will be no fuel economy loss. Presently, its vehicles which are meeting the California 1.5 gpm NOx requirement do so with a 10-percent fuel economy loss.

In its submission to the Department of Transportation and the National Highway Traffic Safety Administration, AMC stated that, on the basis of present knowledge, and with emission standards of 1.5 gpm HC, 15 gpm CO, and 2.0 gpm NOx, it believes that it can meet a 22.8 mpg average by 1985. This does not allow for any new safety standards that would affect fuel economy. Based on available data, AMC is projecting a fleet average of 19 mpg if it must meet emission standards of 0.41 gpm HC, 9.0 gpm CO, and 1.0 gpm NOx.

In their recent testimony before the House Ways and Means Committee these same manufacturers stated that they are committed to achieving the fuel economy standard. However, they believe, much as General Motors stated "the adoption by the Congress of a reasonable schedule of emission standards such as those in the Dingell/Broyhill bill (H.R. 6161) is critically important to achieving [the 1985 target of 27.5 mpg]." 1/

Volkswagen Manufacturing of America, Inc., feels that if the emission levels presently in effect were continued and its imported automobiles were counted as part of its fleet when calculating the fuel economy average 2/ it would have a fleet average high enough to meet the 27.5 mpg standard.

1/ House Committee on Ways and Means, 95th Cong., 1st Sess., "Prepared Statements of Public Witnesses, Tax Aspects of the President's Energy Program Hearing," p. 21 (May 25, 1977).

2/ See footnote 1/, p. 38.

Several reports have been made by various Federal agencies on the issue of whether the automakers can indeed meet the emission level standards while concurrently achieving the EPCA average fuel economy standard. In 1974 a study done for Congress by the Department of Transportation and the Environmental Protection Agency, "Potential for Motor Vehicle Fuel Economy Improvement," commonly referred to as the "120-day study," concluded that a 40 to 60 percent improvement in fuel economy could be achieved even with the application of stringent fuel emission controls. The "300-day study" which followed stated that the 27.5 mpg standard could be met as well as the national goals for clean air and occupant safety. Most recently, a report (the Five-Agency report) prepared and issued by the Department of Commerce (DOC), the Department of Transportation (DOT), the Energy Research and Development Administration (ERDA), Environmental Protection Agency (EPA), and the Federal Energy Administration (FEA), working in conjunction one with another, also determined that the 27.5 mpg standard could be met as well as the national goals for clean air and occupant safety.

The "Five-Agency Report" based its estimates on the application of one of two sets of technology, current technology and advanced technology. Since fuel economy improvement depends on the extent to which more fuel-efficient emission control technology

is developed by the time such fuel economy standards take place, it was deemed necessary to estimate on the basis of different assumptions as to the speed at which new technology can be implemented. The use of current technology was assumed to be a gradual refinement of present technology plus the use of a three-way catalyst and improved carburetors for NOx emission standards of 1.0 gpm and below. A greater degree of success in the refinement of the current technology together with the early availability and widespread use of electronic control systems to optimize various engine and emission control parameters were assumed for estimates based on advanced technology. The fuel economy of the new car fleet, given different emission schedules and based on different technology assumptions, was estimated to be the following.

Estimated Fuel Economy of New Car Fleet in Miles Per Gallon by Model Year, for Each Schedule of Emission Control 1/

Schedule*

Model year	Current Technology Case					Advanced Technology Case				
	Base	I	II	III	IV	Base	I	II	III	IV
1977	18.5	18.5	18.5	18.5	18.5	19.0	19.0	19.0	19.0	19.0
1978	20.7	***	20.7	20.7	20.7	21.1	***	21.1	21.1	21.1
1979	21.8	***	21.8	21.8	19.9	22.2	***	22.2	22.2	22.0
1980	22.7	*** 19.6	22.7	22.7	20.3	23.1	*** 20.7	23.1	23.1	22.7
1981	24.1	20.9	24.1	24.1	21.7	24.5	22.5	24.5	24.5	24.3
1982	25.5	22.1	24.0	24.0	23.0	25.9	24.4	25.9	25.9	25.9
1983	26.8	23.4	25.3	25.3	24.2	27.2	26.1	27.2	27.2	27.2
1984	28.4	24.9	26.8	26.8	25.7	28.8	28.1	28.8	28.8	28.8
1985	29.3	25.8	27.7	27.7	26.6	29.7	29.7	29.7	29.7	29.7

* Base: 1.5/15/2.0 1977 - 1985

I: 1.5/15/2.0 1977; .41/3.4/.4 1978 - 1985
II: 1.5/15/2.0 1977 - 1981; .9/9/1.5 1982 - 1985
III: 1.5/15/2.0 1977 - 1979; .9/9/2.0 1980 - 1981; .41/3.4/2.0 1982 - 1985
IV: 1.5/15/2.0 1977 - 1978; .41/3.4/2.0 1979; .41/3.4/1.0 1980 - 1985

*** Achievement of 0.41/3.4/0.4 as required in Schedule I is not considered technologically feasible prior to the 1980 model year. Achievement of these standards in the 1980 model year would require an expanded development effort initiated early in 1977; otherwise, achievement may not be feasible prior to the 1981 model year.

1/ "Analysis of Effects of Several Specified Alternative Automobile Emission Control Schedules Upon Fuel Economy and Costs," February 1977, DOC, DOT, ERDA, EPA, FEA, p. 7.

To achieve these emission level reductions the automakers will have to develop and introduce a new series of technological improvements. Depending upon the timing of its implementation and the cost of the research and development needed to bring it into production, this new technology could add significantly to the initial new-car price. The following table, taken from the "Five-Agency Study", summarizes the technology assumptions and estimated equipment cost at the different emission levels for the current technology and the advanced technology projections. In determining the equipment costs it was assumed that unless otherwise indicated all technologies (and therefore costs) for the 1.5 gpm HC, 15 gpm CO, and 2.0 gpm NOx base for the current technology case are included in all schedules. For the advanced technology case, the costs of the additional advanced technologies are included in the table and appear in each of the alternative schedules, including the base schedule.

TECHNOLOGIES AND COSTS ASSUMED FOR ANALYSIS 1/

Current Technology			Advanced Technology	
Incremental Cost Estimates 2/			Incremental Cost Estimates 2/	
Emission Levels (HC/CO/NOx)	Technologies Assumed	Sticker Price	Technologies Assumed	Sticker Price
1.5/15/2.0	Oxidation Catalyst High Energy Ignition Propotional EGR	Base	Base Plus Air Injection Electronic Spark Control Electronic EGR	$(25) (55) (20) $100
0.9/9/2.0	Base Plus Air Injection	$(25) $ 25	Above Plus Port Liners Start Catalyst	$(5) (50) $155
0.9/9/1.5	Same as Above	$ 25	Same as Above	$155
0.41/3.4/2.0	Same as Above	$ 25	Above Plus Improved Fuel Metering Electronic AIR	$(15) (20) $190
0.41/3.4/1.0	Above Plus Improved Fuel Metering Start Catalyst 3-Way Catalyst System (Replaces Ox. Cat. and Air Injection)	$(15) (50) (35) 3/ $125	Above Plus 3-Way Catalyst System (Replaces Start Catalyst on 50% of cars; replaces Ox. Cat., Air Injection, and Electronic Air on other 50%)	$(20) 4/ $210
0.41/3.4/0.4	Same as Above but 3-Way Catalyst Replacement Req'd	$(0) $125	Same as Above but 3-Way Catalyst Replacement Req'd	$(0) $210

1/ "Analysis of Effects of Several Specified Alternative Automotive Automobile Emission Control Schedules Upon Fuel Economy and Costs," p. 43.

2/ All costs are incremental to the Current Technology base case, and are expressed in undiscounted 1975 dollars.

3/ Costs shown are net increments over costs of components replaced. Maintenance cost includes three oxygen sensor changes.

4/ Costs shown are average net increments over costs of components replaced in two systems assumed. Maintenance cost includes three oxygen sensor changes on all cars.

According to a recent statement by the EPA Administrator, "standards of 0.4 (gpm HC)/3.4 (gpm CO)/1.0 (gpm NOx) could increase the sticker price of cars by a maximum of $250 in 1985 with an additional increase of $80 if the 0.4 gpm NOx is imposed". 1/ He believes this estimation, which includes an 80-percent markup from direct manufacturer costs, to be overstated since it includes some technological improvements which the manufacturers would use to meet fuel economy standards.

The auto manufacturers have tended to place their estimates of increased fuel emission technology cost above those of the "Five-Agency Report" and the administration. While the technology which would be used to meet the proposed emission levels and the cost incurred by this technology vary from manufacturer to manufacturer it is generally agreed that meeting the Clean Air Act's ultimate requirements by the early 1980's could add between $200 and $350 in initial new car cost to the consumer. Ford Motor Company's estimate of the price increases related to meeting two of the proposed emission schedules (H.R. 6161 and that of the Administration) are included in the following tabulation:

	ADMINISTRATION PROPOSAL		H.R. 6161 DINGELL/BROYHILL PROPOSAL	
Year	Emission Standards HC/CO/NOx	Cost (RPE) 1/ $	Emission Standards	Cost (RPE) 1/ $
1979----	.41/9/2	TBD/250 2/	1.5/15/2	Base
1980----	.41/9/2	250	.41/9/2	250
1981----	.41/3.4/1	300/331	.41/9/2	250/281
1982----	.41/3.4/1	300/331	.41/9/1	250/281

1/ RPE--Retail Price Equivalent.
2/ TBD--To be determined.

1/ "Testimony of Douglas M. Castle", p. 16.

A technological innovation which may be used to meet the fuel economy standards is dieselization. It is also a major part of the picture when attempting to focus on the possibilities of the auto industry to meet the EPA requirements. The diesel engine offers the chance for substantial fuel savings, often boosting fuel economy by as much as 50 percent for some automobiles. According to the "Five-Agency Report", "the use of diesel engines in place of a small fraction (8 to 20 percent by 1985) of gasoline engines would result in small but significant improvement in fleet-average fuel economy and a resulting reduction in fuel consumption." 1/ However, there is a large uncertainty as to the diesel's ability to meet the 0.4 gpm NOx standard or even, for the large-size autos, a 1.0 gpm NOx standard.

Several of the automakers have introduced or will be introducing diesel engines in their new-car lineup. This year Volkswagen plans to sell 10,000 Rabbits equipped with diesel engines. By 1980-81 it foresees a 20 to 30 percent dieselization of its fleet. It has mitigated many of the problems inherent in diesel engines--soot, odor, cold starts, and noise. According to Volkswagen, its new VW diesel boosts fuel economy by 50 percent and doubles expected engine life. However, if the NOx level is lowered below 1.5 gpm, Volkswagen contends that its sales of diesels would be eliminated. Other manufacturers have voiced the same fear of not being able to lower the NOx level of their diesel engines in order to meet EPA requirements. For this reason certain exemptions for the diesel engine have been proposed by the Congress and the administration. In the aforementioned testimony before the House

---

1/ "Analysis of Effects of Several Specified Alternative Automobile Emission Control Schedules Upon Fuel Economy and Costs", pp. 5-6.

Subcommittee on Health and Environment, the Administrator of the EPA stated that in order to encourage diesel technology he would support a waiver of the proposed NOx penalty 1/ if the vehicle could meet the 1.0 gpm standard for 100,000 miles. Both the House and the Senate bills have made provisions for the granting of waivers to the NOx standards for those automobiles which use an "innovative engine system" (S. 262) or an "innovative power train technology" (H.R. 6161). These provisions would allow for the utilization of diesel engines. However, waivers could not set the standard above 2.0 gpm NOx for such engines. In the opinion of Rep. Dingel (D.-Mich.), cosponsor of the House-passed amendments, failure to grant these exemptions would "[rule] out diesels and other advanced technologies which are presenting enormous opportunities for energy savings." 2/

The conflicts between the fuel emission levels, both present and future, and the average fuel economy standards of the EPCA remain unresolved; the Congress, the administration, and the auto industry have yet to come to an agreement on those standards which will serve the Nation best, allowing for cleaner air and increased fuel savings while still remaining technologically feasible.

1/ "Testimony of Douglas M. Castle", p. 14.
2/ Congressional Record, HS106, May 26, 1977.

Safety and Damageability Standards

Enacted in 1966 and amended numerous times since, the National Traffic and Motor Vehicle Safety Act of 1965 1/ was legislated by Congress to "provide for a coordinated national safety program and establishment of safety standards for motor vehicles in interstate commerce to reduce traffic accidents and the deaths, injuries, and property damage which occur in such accidents. . . ." 2/ Proposed by President Johnson, this legislation resulted in the setting of certain minimum Federal safety standards for all motor vehicles and equipment parts manufactured in or imported into the United States. Most previous safety standards affecting new automobiles in interstate transportation were established voluntarily by the automakers upon recommendation by the Society of Automotive Engineers. Some mandatory State regulations and the Federal seatbelt and brake-fluid laws were also in effect. The 1966 Act attempts to resolve the inherent problems of such a system by establishing mandatory Federal standards which would be uniformly applicable nationwide.

By this law the Secretary of Transportation is given the broad authority of ordering the implementation of what he determines to be appropriate Federal motor-vehicle safety standards. Before making his decision the Secretary must give due consideration to (1) relevant available motor-vehicle data, (2) the reasonableness, practicality, and appropriateness of the proposed standard, and (3) the contribution the standard will make to carrying out the purposes of the Act. He must also consult with the Vehicle Equipment Safety Commission as well as those agencies and commissions he deems appropriate. The decisions made by the Secretary

---

1/ Pub. L. No. 89-563; 80 Stat. 718; 15 USC 1391 et seq.
2/ 1966 U.S. Code Cong. and Admin. News, p. 2709.

may not take effect sooner than 180 days nor more than 1 year after the promulgation of the order except in extraordinary cases. Within the same time delay he may revoke any safety standard he has ordered.

The power entrusted to the Secretary under this act is considerable but it was not given with the intent that the Secretary would "take over the design and manufacturing functions of private industry." 1/ Rather, the purpose was "to achieve a substantial improvement in the safety characteristics of vehicles." 2/ One of the basic reasons for the passage of this legislation and one of its major effects was to allow the Federal Government to develop a technical capacity (1) to test industry's performance and do research on accident and injury prevention, (2) to innovate safety design and engineering and to serve as a source of measurement for industry's performance, and (3) to develop and implement safety standards.

The means to insure compliance with these safety standards and the ability to assess civil penalties (up to $800,000 at $1,000 per violation) are provided by the 1966 act, as amended. Provisions are also made for (1) informing potential customers of the performance and safety of the vehicle or automotive part, and (2) notifying purchasers and dealers of the article if a defect should be found after sale by the manufacturer.

1/ Id., p. 2712.
2/ Id.

93-188 O - 77 - 14

Since the enactment of this law the Secretary has set down several safety standards for new automobiles. Those standards can be grouped into three main categories, "Series 100, 200 and 300". "Series 100" standards are aimed at crash avoidance; increased protection to the occupants of the vehicle is offered by "Series 200" standards; those requirements included in "Series 300" aim at increasing the "crashworthiness" of the motor vehicle. Certain restrictions and additions to standards as set by the Secretary have been written into law. Occupant restraint systems standards numbered 208 (49 CFR 571.208) were amended in 1974 to require that automakers provide purchasers of new motor vehicles with an alternative to the safety belt ignition interlock system for occupant crash protection 1/ (15 USC 1410b). The Motor Vehicle Information and Cost Savings Act, as amended, 2/ gave the Secretary authority to set bumper standards designed in general to reduce accident damage to a paesenger vehicle's front and rear end (15 USC 1912). This damageability standard is established in addition to the crashworthiness standard set pursuant to the National Traffic and Motor Vehicle Safety Act of 1966.

1/ Pub. L. No. 93-492; 88 Stat. 1482 (1974).
2/ Pub. L. No. 92-513; 86 Stat. 947 (1972).

Conflicts with fuel economy standards

It is difficult to predict the effect of safety and damageability standards on fuel economy since it is not known how the manufacturers will go about meeting the new safety, damageability, and fuel economy regulations. However, up to 1975, safety and damageability standards, which added between 275 and 300 pounds to the new-car weight, resulted in a fuel economy penalty of about 4 percent. The following tabulation, taken from a publication of the DOT and the EPA, 1/ is a breakdown of automobile weight changes due to the implementation of successive safety and damageaility standards in effect up to 1975.

Standards in Effect	Weight Increase (lbs.)
100 Series	5
201 - 204, 207, 210	32
208 (Belts)	35
214 (Side Door Strength)	50
215 (Bumper)	141
215 (Bumper Corner Requirements)	9
105-75 (Hydraulic Brakes)	5-25
	277-297

Originally, weight increases were greater than necessary. Since there were no overriding considerations due to material and fuel costs, direct design approaches using conventional materials were used to increase structural strength. However, increased material costs and the impact of added weight on fuel economy have led the automakers to use new and innovative designs as well as alternative materials when developing safety features. 2/ Nonetheless, if automobile manufacturers are required

1/ "Potential for Motor Vehicle Fuel Economy Improvement", Department of Transportation and Environmental Protection Agency, p. 91 (1974).

2/ Id., p. 92.

to meet advanced safety requirements such as a 40 mph-frontal-impact standard and a 20-mph-side-impact standard, it is estimated that 150 to 200 pounds will be added to the new-car weight, decreasing average fuel economy by about 0.6 to 0.8 mpg. 1/

The recently promulgated occupant restraint system (42 F.R. 34289 (July 5, 1977)) could add up to 50 pounds to new-car weight depending, once more, on the type of materials and the design used in implementing it. For example, the system which will probably be used by Volkswagen, a combined belt/bolster system, will probably have a negligible effect on new-car weight.

1/ "The Report by the Federal Task Force on Motor Vehicle Goals Beyond 1980," vol. 2, pp. 5-13 and 5-19 (September 2, 1976).

APPENDIX D

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
BASE CASE

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
ITC BASELINE FORECAST WITH 10% GAS PRICE GROWTH

TABLE 1,00 SUMMARY

LINE	I T E M		1975	1976	1977	1978	1979	1980
1	DESIRED STOCK OF AUTOS	MILL AUTOS	93,743	96,770	99,853	102,845	105,199	107,181
2		%GROWTH	1,32	3,23	3,19	3,00	2,29	1,88
3								
4	ACTUAL YR-END STOCK OF AUTOS	MILL AUTOS	96,726	99,685	102,107	105,012	107,037	108,457
5		%GROWTH	2,98	3,06	2,43	2,84	1,93	1,33
6								
7	NEW REGISTRATIONS OF AUTOS	MILL AUTOS	8,350	9,868	10,953	11,112	11,349	11,785
8		%GROWTH	-10,08	18,18	10,99	1,45	2,14	3,84
9								
10	FOREIGN NEW REGIS,	MILL AUTOS	1,517	1,463	1,540	1,532	1,447	1,449
11		%GROWTH	3,87	-3,55	5,22	-0,50	-5,53	0,09
12								
13	DOMESTIC NEW REGIS,	MILL AUTOS	6,833	8,405	9,413	9,580	9,902	10,336
14		%GROWTH	-12,68	23,01	12,00	1,77	3,36	4,38
15								
16	VEHICLE MILES TRAVELED	BILL MILES	1027,4	1029,0	1032,8	1040,2	1055,2	1071,5
17		%GROWTH	3,20	0,15	0,37	0,71	1,44	1,55
18								
19	SCRAPPAGE OF AUTOS	MILL AUTOS	5,548	6,909	8,531	8,208	9,324	10,365
20		%GROWTH	-15,52	24,53	23,47	-3,79	13,59	11,17
21								
22	NEW AUTOS FLEET M,P,G, (EPA)		17,17	17,82	18,64	19,51	20,43	21,44
23		%GROWTH	6,42	3,80	4,60	4,70	4,72	4,93
24								
25	NEW DOMESTIC EPA TEST M,P,G,		16,14	16,95	17,81	18,68	19,68	20,72
26		%GROWTH	5,84	5,06	5,08	4,88	5,36	5,29
27								
28	NEW DOMESTIC AUTOS M,P,G,		16,14	16,95	17,81	18,68	19,68	20,72
29		%GROWTH	5,75	5,06	5,08	4,88	5,36	5,29
30								
31	NEW FOREIGN AUTOS M,P,G,		24,12	25,24	26,01	27,05	27,66	28,48
32		%GROWTH	3,62	4,67	3,03	4,01	2,24	2,95
33								
34								
35	SHARE OF NEW REGISTRATIONS:							
36								
37	SUBCOMPACT		0,291	0,238	0,223	0,220	0,206	0,199
38		%GROWTH	12,94	-18,14	-6,32	-1,46	-6,40	-3,15
39								
40	COMPACT		0,219	0,179	0,183	0,176	0,186	0,198
41		%GROWTH	16,96	-18,01	1,86	-3,75	5,84	6,64
42								
43	MID-SIZE		0,228	0,301	0,281	0,276	0,270	0,270
44		%GROWTH	-12,14	31,87	-6,72	-1,71	-2,13	-0,01
45								
46	FULL-SIZE		0,169	0,186	0,222	0,237	0,246	0,239
47		%GROWTH	-20,07	10,49	18,94	7,08	3,72	-3,07
48								
49	LUXURY		0,094	0,096	0,092	0,092	0,093	0,094
50		%GROWTH	10,41	1,83	-3,51	-0,87	0,96	1,85

A PRODUCT OF WHARTON EFA, INC,

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
ITC BASELINE FORECAST WITH 10% GAS PRICE GROWTH

TABLE 1.00 SUMMARY

LINE	I T E M		1981	1982	1983	1984	1985
1	DESIRED STOCK OF AUTOS	MILL AUTOS	109,305	111,256	113,096	115,021	117,056
2		%GROWTH	1,98	1,78	1,65	1,70	1,77
3							
4	ACTUAL YR-END STOCK OF AUTOS	MILL AUTOS	109,591	110,755	112,288	114,851	117,742
5		%GROWTH	1,05	1,06	1,38	2,28	2,52
6							
7	NEW REGISTRATIONS OF AUTOS	MILL AUTOS	12,001	12,214	12,548	13,594	14,000
8		%GROWTH	1,83	1,78	2,70	8,41	2,95
9							
10	FOREIGN NEW REGIS,	MILL AUTOS	1,384	1,407	1,417	1,495	1,515
11		%GROWTH	-4,47	1,66	0,71	5,51	1,35
12							
13	DOMESTIC NEW REGIS,	MILL AUTOS	10,617	10,807	11,127	12,104	12,485
14		%GROWTH	2,72	1,79	2,96	8,78	3,15
15							
16	VEHICLE MILES TRAVELED	BILL MILES	1086,7	1103,5	1121,5	1103,9	1175,9
17		%GROWTH	1,82	1,54	1,63	2,00	2,79
18							
19	SCRAPPAGE OF AUTOS	MILL AUTOS	10,867	11,050	11,012	11,035	11,109
20		%GROWTH	0,84	1,68	-0,35	0,21	0,67
21							
22	NEW AUTOS FLEET M,P,G, (EPA)		22,33	23,24	24,14	25,06	25,91
23		%GROWTH	4,14	4,06	3,88	3,84	3,39
24							
25	NEW DOMESTIC EPA TEST M,P,G,		21,67	22,57	23,50	24,44	25,31
26		%GROWTH	4,57	4,16	4,10	4,02	3,54
27							
28	NEW DOMESTIC AUTOS M,P,G,		21,67	22,57	23,50	24,44	25,31
29		%GROWTH	4,57	4,16	4,10	4,02	3,54
30							
31	NEW FOREIGN AUTOS M,P,G,		29,11	30,00	30,69	31,57	32,28
32		%GROWTH	2,22	3,07	2,29	2,87	2,24
33							
34							
35	SHARE OF NEW REGISTRATIONS:						
36							
37	SUBCOMPACT		0,188	0,187	0,182	0,176	0,172
38		%GROWTH	-5,58	-0,83	-2,65	-3,39	-2,09
39							
40	COMPACT		0,215	0,218	0,221	0,220	0,220
41		%GROWTH	8,50	1,21	1,43	-0,29	-0,31
42							
43	MID-SIZE		0,270	0,267	0,265	0,263	0,262
44		%GROWTH	0,22	-1,19	-0,87	-0,88	-0,27
45							
46	FULL-SIZE		0,230	0,230	0,233	0,240	0,243
47		%GROWTH	-3,43	-0,11	1,14	3,14	1,18
48							
49	LUXURY		0,096	0,098	0,099	0,101	0,103
50		%GROWTH	1,90	1,73	1,58	1,75	2,20

A PRODUCT OF WHARTON EFA, INC,

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
ITC BASELINE FORECAST WITH 10% GAS PRICE GROWTH

TABLE 1.01 SHARES BY SIZE CLASS

LINE	ITEM		1975	1976	1977	1978	1979	1980
1	SHARES OF DESIRED STOCK:							
2								
3	SUBCOMPACTS		0.231	0.204	0.208	0.205	0.200	0.198
4		%GROWTH	14.00	-11.69	0.09	0.58	-2.58	-0.79
5								
6	COMPACTS		0.188	0.189	0.178	0.174	0.179	0.187
7		%GROWTH	3.72	0.43	-5.82	-2.51	3.08	4.19
8								
9	MID-SIZE		0.264	0.263	0.261	0.262	0.261	0.263
10		%GROWTH	7.37	-0.60	-0.57	0.10	-0.22	0.80
11								
12	FULL SIZE		0.224	0.252	0.265	0.268	0.267	0.258
13		%GROWTH	-21.03	12.32	5.02	1.14	-0.16	-3.47
14								
15	LUXURY		0.092	0.092	0.092	0.092	0.093	0.094
16		%GROWTH	7.60	0.11	-0.35	0.00	0.92	1.35
17								
18								
19	SHARES OF ACTUAL YR-END STOCKS:							
20								
21	SUBCOMPACT		0.168	0.180	0.190	0.198	0.204	0.208
22		%GROWTH	9.80	6.76	5.69	4.34	3.00	2.00
23								
24	COMPACT		0.175	0.177	0.179	0.179	0.181	0.183
25		%GROWTH	2.98	0.91	1.01	0.37	0.81	1.19
26								
27	MID-SIZE		0.231	0.236	0.240	0.244	0.248	0.252
28		%GROWTH	-0.96	2.30	1.70	1.58	1.47	1.60
29								
30	FULL SIZE		0.338	0.318	0.301	0.288	0.276	0.265
31		%GROWTH	-5.33	-5.82	-5.34	-4.43	-4.08	-4.08
32								
33	LUXURY		0.087	0.089	0.090	0.090	0.091	0.092
34		%GROWTH	1.35	1.58	1.10	0.73	0.70	0.80
35								
36								
37	DOMESTIC SHARE OF NEW REGISTRATIONS:							
38								
39	DOMESTIC SHARE OF TOTAL		0.818	0.852	0.859	0.862	0.872	0.877
40		%GROWTH	-2.89	4.08	0.91	0.31	1.20	0.53
41								
42	DOMESTIC SHARE OF SUBCOMPACTS		0.4694	0.4573	0.4600	0.4600	0.4700	0.4800
43		%GROWTH	-2.68	-2.58	0.59	0.0	2.17	2.13
44								
45	DOMESTIC SHARE OF COMPACTS		0.9264	0.9464	0.9400	0.9400	0.9450	0.9450
46		%GROWTH	0.15	2.16	-0.68	0.0	0.53	0.0
47								
48	DOMESTIC SHARE OF LUXURY		0.8792	0.9005	0.9000	0.9050	0.9100	0.9100
49		%GROWTH	-0.33	2.42	-0.06	0.56	0.55	0.0

A PRODUCT OF WHARTON EFA, INC.

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
ITC BASELINE FORECAST WITH 10% GAS PRICE GROWTH

TABLE 1.01 SHARES BY SIZE CLASS

LINE	ITEM		1981	1982	1983	1984	1985
1	SHARES OF DESIRED STOCK:						
3	SUBCOMPACTS		0.193	0.192	0.188	0.183	0.179
4		%GROWTH	-2.62	-0.43	-2.03	-2.86	-2.35
6	COMPACTS		0.197	0.200	0.204	0.205	0.206
7		%GROWTH	5.69	1.60	1.72	0.65	0.56
9	MID-SIZE		0.266	0.266	0.267	0.267	0.267
10		%GROWTH	0.94	0.16	0.17	0.01	0.10
12	FULL SIZE		0.249	0.245	0.243	0.246	0.247
13		%GROWTH	-3.57	-1.61	-0.52	1.04	0.83
15	LUXURY		0.095	0.097	0.098	0.099	0.101
16		%GROWTH	1.39	1.33	1.32	1.54	1.82
19	SHARES OF ACTUAL YR-END STOCKS:						
21	SUBCOMPACT		0.210	0.209	0.207	0.203	0.198
22		%GROWTH	0.59	-0.24	-1.11	-1.98	-2.42
24	COMPACT		0.187	0.192	0.196	0.200	0.204
25		%GROWTH	2.24	2.24	2.24	2.07	1.79
27	MID-SIZE		0.256	0.259	0.262	0.264	0.265
28		%GROWTH	1.68	1.43	1.07	0.67	0.36
30	FULL SIZE		0.255	0.247	0.241	0.238	0.237
31		%GROWTH	-3.90	-3.21	-2.28	-1.16	-0.36
33	LUXURY		0.092	0.093	0.094	0.095	0.096
34		%GROWTH	0.86	0.88	0.96	1.14	1.31
37	DOMESTIC SHARE OF NEW REGISTRATIONS:						
39	DOMESTIC SHARE OF TOTAL		0.885	0.885	0.887	0.890	0.892
40		%GROWTH	0.07	0.01	0.25	0.34	0.19
42	DOMESTIC SHARE OF SUBCOMPACTS		0.4900	0.4900	0.4900	0.4900	0.4900
43		%GROWTH	2.08	0.0	0.0	0.0	0.0
45	DOMESTIC SHARE OF COMPACTS		0.9500	0.9500	0.9500	0.9500	0.9500
46		%GROWTH	0.53	0.0	0.0	0.0	0.0
48	DOMESTIC SHARE OF LUXURY		0.9100	0.9100	0.9100	0.9100	0.9100
49		%GROWTH	0.0	0.0	0.0	0.0	0.0

A PRODUCT OF WHARTON EFA, INC.

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
ITC BASELINE FORECAST WITH 10% GAS PRICE GROWTH

TABLE 1.02 NEW REGISTRATIONS AND STOCKS BY SIZE CLASS

LINE	ITEM		1975	1976	1977	1978	1979	1980
1	NEW REGISTRATIONS:							
2								
3	SUBCOMPACT	MILL AUTOS	2.027	2.588	2.681	2.641	2.333	2.346
4		%GROWTH	1.56	-3.26	3.97	-0.05	-4.41	0.56
5								
6	COMPACT	MILL AUTOS	1.825	1.768	1.999	1.952	2.110	2.337
7		%GROWTH	5.17	-3.11	13.06	-2.36	8.10	10.73
8								
9	MID-SIZE	MILL AUTOS	1.905	2.968	3.073	3.064	3.063	3.180
10		%GROWTH	-20.99	55.84	3.53	-0.28	-0.04	3.83
11								
12	FULL SIZE	MILL AUTOS	1.408	1.838	2.827	2.636	2.793	2.811
13		%GROWTH	-28.13	30.57	32.02	8.64	5.93	0.64
14								
15	LUXURY	MILL AUTOS	0.786	0.985	1.013	1.018	1.050	1.111
16		%GROWTH	-0.72	20.38	7.10	0.57	3.11	5.76
17								
18	DESIRED STOCK:							
19								
20	SUBCOMPACT	MILL AUTOS	22.300	20.296	20.808	21.524	21.381	21.493
21		%GROWTH	17.40	-8.99	2.52	3.44	-0.66	0.53
22								
23	COMPACT	MILL AUTOS	18.253	18.871	18.205	18.254	19.179	20.247
24		%GROWTH	6.82	3.50	-3.53	0.27	5.07	5.57
25								
26	MID-SIZE	MILL AUTOS	25.582	26.207	26.690	27.477	27.947	28.544
27		%GROWTH	10.57	2.44	1.85	2.95	1.71	2.14
28								
29	FULL SIZE	MILL AUTOS	21.695	25.113	27.014	28.100	28.597	27.971
30		%GROWTH	-18.67	15.75	7.57	4.02	1.77	-2.19
31								
32	LUXURY	MILL AUTOS	8.915	9.198	9.389	9.656	9.933	10.200
33		%GROWTH	10.81	3.17	2.07	2.84	2.87	2.69
34								
35	YEAR-END ACTUAL STOCKS:							
36								
37	SUBCOMPACT	MILL AUTOS	16.296	17.929	19.409	20.827	21.867	22.600
38		%GROWTH	13.07	10.02	8.26	7.31	4.99	3.35
39								
40	COMPACT	MILL AUTOS	16.965	17.643	18.254	18.843	19.361	19.890
41		%GROWTH	6.05	3.99	3.47	3.22	2.75	2.73
42								
43	MID-SIZE	MILL AUTOS	22.329	23.542	24.523	25.620	26.499	27.280
44		%GROWTH	2.00	5.43	4.17	4.47	3.43	2.95
45								
46	FULL SIZE	MILL AUTOS	32.701	31.740	30.776	30.249	29.588	28.756
47		%GROWTH	-2.51	-2.94	-3.04	-1.71	-2.19	-2.81
48								
49	LUXURY	MILL AUTOS	8.435	8.830	9.144	9.473	9.723	9.930
50		%GROWTH	4.38	4.68	3.55	3.59	2.64	2.13

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
ITC BASELINE FORECAST WITH 10% GAS PRICE GROWTH

TABLE 1,02 NEW REGISTRATIONS AND STOCKS BY SIZE CLASS

LINE	I T E M		1981	1982	1983	1984	1985
1	NEW REGISTRATIONS:						
2							
3	SUBCOMPACT	MILL AUTOS	2,257	2,287	2,287	2,395	2,414
4		%GROWTH	-3,81	1,34	-0,02	4,73	0,80
5							
6	COMPACT	MILL AUTOS	2,582	2,660	2,771	2,996	3,075
7		%GROWTH	10,49	3,01	4,17	8,15	2,63
8							
9	MID-SIZE	MILL AUTOS	3,246	3,264	3,323	3,571	3,666
10		%GROWTH	2,05	0,56	1,81	7,45	2,67
11							
12	FULL SIZE	MILL AUTOS	2,764	2,810	2,919	3,264	3,400
13		%GROWTH	-1,66	1,67	3,88	11,82	4,17
14							
15	LUXURY	MILL AUTOS	1,152	1,193	1,245	1,373	1,445
16		%GROWTH	3,77	3,54	4,32	10,31	5,21
17							
18	DESIRED STOCK:						
19							
20	SUBCOMPACT	MILL AUTOS	21,149	21,283	21,140	21,005	21,028
21		%GROWTH	-1,60	0,63	-0,67	-0,64	0,11
22							
23	COMPACT	MILL AUTOS	21,623	22,203	22,896	23,570	24,300
24		%GROWTH	6,80	2,68	3,12	2,95	3,09
25							
26	MID-SIZE	MILL AUTOS	29,115	29,470	29,928	30,615	31,417
27		%GROWTH	2,00	1,22	1,55	2,30	2,62
28							
29	FULL SIZE	MILL AUTOS	27,253	27,098	27,331	28,285	29,081
30		%GROWTH	-2,57	-0,57	0,86	3,34	2,96
31							
32	LUXURY	MILL AUTOS	10,450	10,701	10,992	11,416	11,916
33		%GROWTH	2,45	2,40	2,72	3,85	4,38
34							
35	YEAR-END ACTUAL STOCKS:						
36							
37	SUBCOMPACT	MILL AUTOS	22,971	23,159	23,219	23,278	23,286
38		%GROWTH	1,68	0,82	0,26	0,26	0,03
39							
40	COMPACT	MILL AUTOS	20,548	21,231	22,007	22,975	23,975
41		%GROWTH	3,31	3,33	3,65	4,40	4,35
42							
43	MID-SIZE	MILL AUTOS	28,028	28,731	29,439	30,314	31,188
44		%GROWTH	2,78	2,51	2,46	2,97	2,89
45							
46	FULL SIZE	MILL AUTOS	27,924	27,315	27,062	27,358	27,986
47		%GROWTH	-2,89	-2,18	-0,93	1,10	2,15
48							
49	LUXURY	MILL AUTOS	10,120	10,318	10,561	10,925	11,387
50		%GROWTH	1,91	1,95	2,36	3,45	3,86

A PRODUCT OF WHARTON EFA, INC.

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
ITC BASELINE FORECAST WITH 10% GAS PRICE GROWTH

TABLE 1.03 CAPITALIZED COSTS PER MILE

LINE	I T E M		1975	1976	1977	1978	1979	1980
1	AVG NOMINAL CAP. COST PER MILE	$/MILE	0.195	0.208	0.222	0.238	0.253	0.269
2		%GROWTH	8.64	6.32	7.14	7.02	6.51	6.18
3								
4	AVG REAL CAP. COST PER MILE	1972 $	0.152	0.153	0.154	0.157	0.159	0.161
5		%GROWTH	-0.459	0.525	0.865	1.498	1.445	1.161
6								
7	CAPITALIZED COST PER MILE BY SIZE:							
8								
9	SUBCOMPACTS	$/MILE	0.152	0.163	0.174	0.187	0.199	0.212
10		%GROWTH	7.91	7.17	6.79	7.10	6.72	6.46
11								
12	COMPACTS	$/MILE	0.176	0.186	0.200	0.215	0.228	0.242
13		%GROWTH	9.05	6.01	7.36	7.33	6.22	6.04
14								
15	MID-SIZE	$/MILE	0.198	0.208	0.223	0.238	0.254	0.269
16		%GROWTH	10.16	4.78	7.15	6.97	6.45	6.18
17								
18	FULL SIZE	$/MILE	0.217	0.228	0.243	0.259	0.275	0.293
19		%GROWTH	10.09	5.08	6.57	6.73	6.26	6.30
20								
21	LUXURY	$/MILE	0.281	0.293	0.313	0.335	0.357	0.379
22		%GROWTH	11.49	4.30	6.72	6.91	6.55	6.29
23								
24								
25	CAP. COST PER MILE BY FOR/DOM:							
26								
27	TOTAL DOMESTIC	$/MILE	0.196	0.210	0.225	0.242	0.258	0.273
28		%GROWTH	9.12	6.83	7.40	7.28	6.49	6.03
29								
30	TOTAL FOREIGN	$/MILE	0.166	0.178	0.190	0.203	0.218	0.234
31		%GROWTH	6.67	7.68	6.76	6.62	7.33	7.57
32								
33	DOMESTIC SUBCOMPACT	$/MILE	0.154	0.163	0.176	0.188	0.201	0.213
34		%GROWTH	10.29	6.36	7.42	7.37	6.58	6.19
35								
36	FOREIGN SUBCOMPACT	$/MILE	0.151	0.163	0.173	0.185	0.198	0.211
37		%GROWTH	5.80	7.91	6.24	6.86	6.85	6.68
38								
39	DOMESTIC COMPACT	$/MILE	0.178	0.185	0.198	0.213	0.226	0.239
40		%GROWTH	9.07	6.16	7.33	7.35	6.25	5.97
41								
42	FOREIGN COMPACT	$/MILE	0.199	0.216	0.229	0.245	0.263	0.282
43		%GROWTH	9.03	8.71	6.02	7.06	7.17	7.14
44								
45	DOMESTIC LUXURY	$/MILE	0.276	0.287	0.307	0.328	0.349	0.371
46		%GROWTH	11.41	3.95	6.82	6.96	6.56	6.10
47								
48	FOREIGN LUXURY	$/MILE	0.318	0.350	0.371	0.398	0.428	0.462
49		%GROWTH	11.68	9.98	5.93	7.47	7.53	7.79

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
ITC BASELINE FORECAST WITH 10% GAS PRICE GROWTH

TABLE 1.03 CAPITALIZED COSTS PER MILE

LINE	I T E M		1981	1982	1983	1984	1985
1	AVG NOMINAL CAP. COST PER MILE	$/MILE	0.280	0.299	0.318	0.332	0.350
2		%GROWTH	5.46	5.24	5.18	5.56	5.52
3							
4	AVG REAL CAP. COST PER MILE	1972 $	0.163	0.165	0.167	0.169	0.172
5		%GROWTH	1.400	1.156	1.163	1.473	1.468
6							
7	CAPITALIZED COST PER MILE BY SIZE:						
8							
9	SUBCOMPACTS	$/MILE	0.225	0.237	0.250	0.265	0.280
10		%GROWTH	5.93	5.55	5.55	5.74	5.72
11							
12	COMPACTS	$/MILE	0.254	0.268	0.282	0.298	0.314
13		%GROWTH	5.21	5.38	5.24	5.55	5.59
14							
15	MID-SIZE	$/MILE	0.284	0.299	0.314	0.330	0.348
16		%GROWTH	5.41	5.22	5.05	5.35	5.36
17							
18	FULL SIZE	$/MILE	0.309	0.325	0.341	0.358	0.377
19		%GROWTH	5.55	5.10	4.92	5.19	5.16
20							
21	LUXURY	$/MILE	0.399	0.419	0.440	0.462	0.486
22		%GROWTH	5.40	5.00	4.79	5.16	5.06
23							
24							
25	CAP. COST PER MILE BY FOR/DOM:						
26							
27	TOTAL DOMESTIC	$/MILE	0.287	0.302	0.318	0.335	0.353
28		%GROWTH	5.22	5.20	5.09	5.52	5.46
29							
30	TOTAL FOREIGN	$/MILE	0.252	0.267	0.284	0.303	0.322
31		%GROWTH	7.38	6.16	6.43	6.68	6.35
32							
33	DOMESTIC SUBCOMPACT	$/MILE	0.225	0.237	0.249	0.263	0.278
34		%GROWTH	5.85	5.33	5.19	5.66	5.56
35							
36	FOREIGN SUBCOMPACT	$/MILE	0.224	0.237	0.251	0.266	0.281
37		%GROWTH	6.38	5.76	5.88	5.81	5.87
38							
39	DOMESTIC COMPACT	$/MILE	0.252	0.265	0.279	0.294	0.311
40		%GROWTH	5.22	5.33	5.19	5.51	5.57
41							
42	FOREIGN COMPACT	$/MILE	0.300	0.319	0.338	0.359	0.380
43		%GROWTH	6.63	6.17	6.05	6.12	5.92
44							
45	DOMESTIC LUXURY	$/MILE	0.390	0.409	0.427	0.449	0.471
46		%GROWTH	5.18	4.78	4.56	4.97	4.90
47							
48	FOREIGN LUXURY	$/MILE	0.495	0.528	0.563	0.600	0.638
49		%GROWTH	7.16	6.79	6.53	6.64	6.25

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
ITC BASELINE FORECAST WITH 10% GAS PRICE GROWTH

TABLE 1.04 MISCELLANEOUS

LINE	I T E M		1975	1976	1977	1978	1979	1980
1	DESIRED STOCK PER FAMILY	AUTOS	1,252	1,261	1,278	1,293	1,300	1,302
2		%GROWTH	-0,31	0,67	1,35	1,20	0,53	0,19
3								
4	YEAR-END STOCK PER FAMILY	AUTOS	1,292	1,299	1,307	1,320	1,323	1,318
5		%GROWTH	1,32	0,50	0,60	1,06	0,18	-0,36
6								
7	VEHICLE MILES PER FAMILY	THOU MILES	13,727	13,407	13,216	13,079	13,040	13,021
8		%GROWTH	1,54	-2,33	-1,42	-1,04	-0,30	-0,14
9								
10	VEHICLE MILES PER AUTO	THOU MILES	10,778	10,478	10,236	10,044	9,952	9,905
11		%GROWTH	0,21	-2,78	-2,31	-1,88	-0,91	-0,07
12								
13	RATIO-NEW REGIS, TO BEGIN, STOCK	RATIO	0,0889	0,1020	0,1099	0,1088	0,1081	0,1101
14		%GROWTH		14,76	7,70	-0,95	-0,69	1,87
15								
16	RATIO-SCRAPPAGE TO BEGIN, STOCK	RATIO	0,0591	0,0714	0,0856	0,0804	0,0888	0,0968
17		%GROWTH		20,92	19,81	-6,07	10,45	9,07
18								
19	REAL DISP, INCOME PER FAMILY	THOU 72 $	9,406	9,481	9,685	9,858	10,040	10,234
20		%GROWTH	3,17	0,80	2,15	1,79	1,85	1,93
21								
22	FAMILIES WITH INCOME OVER $15,000	%	22,05	20,98	20,23	20,09	21,04	22,60
23		%GROWTH	-0,66	-5,08	-3,37	-0,71	4,74	7,38
24								
25	AVG AGE OF AUTO STOCK	YEARS	5,455	5,655	5,731	5,757	5,777	5,744
26		%GROWTH	0,26	3,67	1,35	0,45	0,35	-0,58

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
ITC BASELINE FORECAST WITH 10% GAS PRICE GROWTH

TABLE 1.04 MISCELLANEOUS

LINE	I T E M		1981	1982	1983	1984	1985
1	DESIRED STOCK PER FAMILY	AUTOS	1.304	1.304	1.303	1.305	1.306
2		%GROWTH	0.14	-0.03	-0.07	0.04	0.19
3							
4	YEAR-END STOCK PER FAMILY	AUTOS	1.308	1.298	1.294	1.301	1.313
5		%GROWTH	-0.78	-0.78	-0.33	0.61	0.92
6							
7	VEHICLE MILES PER FAMILY	THOU MILES	12.967	12.931	12.920	12.964	13.118
8		%GROWTH	-0.42	-0.27	-0.09	0.33	1.19
9							
10	VEHICLE MILES PER AUTO	THOU MILES	9.968	10.016	10.056	10.073	10.111
11		%GROWTH	0.23	0.48	0.40	0.16	0.38
12							
13	RATIO-NEW REGIS, TO BEGIN, STOCK	RATIO	0.1107	0.1115	0.1133	0.1211	0.1219
14		%GROWTH	0.50	0.72	1.62	6.93	0.65
15							
16	RATIO-SCRAPPAGE TO BEGIN, STOCK	RATIO	0.1002	0.1008	0.0994	0.0983	0.0967
17		%GROWTH	3.87	0.63	-1.39	-1.15	-1.57
18							
19	REAL DISP. INCOME PER FAMILY	THOU 72 $	10.377	10.521	10.684	11.048	11.436
20		%GROWTH	1.40	1.38	1.56	3.41	3.51
21							
22	FAMILIES WITH INCOME OVER $15,000	%	24.22	25.79	27.36	29.36	31.94
23		%GROWTH	7.21	6.47	6.07	7.31	8.78
24							
25	AVG AGE OF AUTO STOCK	YEARS	5.673	5.592	5.508	5.413	5.318
26		%GROWTH	-1.24	-1.42	-1.50	-1.72	-1.77

A PRODUCT OF WHARTON EFA, INC.

THE WHARTON EPA AUTOMOBILE DEMAND MODEL
MVMA BASELINE FORECAST JUNE 1977

TABLE 1.05 MILES PER GALLON

LINE	ITEM		1975	1976	1977	1978	1979	1980
1	OVERALL FLEET MILES PER GALLON - WEFA		12.69	12.71	12.82	13.03	13.32	13.70
2		%GROWTH	-0.70	0.17	0.87	1.60	2.21	2.84
3								
4	NEW AUTO MILES PER GALLON (WEFA):							
5								
6	TOTAL		13.29	13.80	14.08	15.12	15.83	16.61
7		%GROWTH	6.43	3.84	0.65	4.70	4.69	4.92
8								
9	SUBCOMPACT		18.78	19.64	20.45	21.32	22.07	23.00
10		%GROWTH	1.89	4.79	4.15	4.24	3.50	4.22
11								
12	COMPACT		13.94	14.82	15.10	15.68	16.66	17.75
13		%GROWTH	5.91	3.47	1.70	3.84	6.28	6.56
14								
15	MID-SIZE		11.70	12.75	13.39	14.10	14.83	15.62
16		%GROWTH	3.87	9.02	5.03	5.27	5.22	5.28
17								
18	FULL SIZE		10.80	11.56	12.42	13.19	13.97	14.58
19		%GROWTH	4.54	7.06	7.37	6.24	5.91	4.36
20								
21	LUXURY		10.51	11.64	12.38	12.93	13.43	13.97
22		%GROWTH	3.95	10.76	6.38	4.45	3.82	4.03
23								
24	NEW AUTO M.P.G. BY FOR/DOM (WEFA):							
25								
26	TOTAL DOMESTIC		12.38	13.04	13.72	14.40	15.17	15.98
27		%GROWTH	5.63	5.33	5.21	4.92	5.80	5.31
28								
29	TOTAL FOREIGN		19.82	20.69	21.25	22.04	22.47	23.09
30		%GROWTH	3.38	4.37	2.75	3.70	1.96	2.76
31								
32	DOMESTIC SUBCOMPACT		17.13	17.95	18.92	19.81	20.87	22.04
33		%GROWTH	0.15	4.78	5.42	4.71	5.36	5.59
34								
35	FOREIGN SUBCOMPACT		20.48	21.33	21.97	22.80	23.25	23.96
36		%GROWTH	3.38	4.15	2.99	3.79	1.96	3.08
37								
38	DOMESTIC COMPACT		13.67	14.23	14.88	15.86	16.48	17.58
39		%GROWTH	6.12	4.08	4.62	3.89	6.56	6.72
40								
41	FOREIGN COMPACT		18.41	19.06	19.57	20.18	20.57	21.20
42		%GROWTH	3.07	3.50	2.70	2.90	2.12	3.05
43								
44	DOMESTIC LUXURY		10.08	11.32	12.07	12.65	13.16	13.70
45		%GROWTH	3.88	12.27	6.65	4.77	4.00	4.16
46								
47	FOREIGN LUXURY		15.19	15.64	16.09	16.46	17.00	17.39
48		%GROWTH	3.47	2.95	2.88	2.35	3.28	2.32

A PRODUCT OF WHARTON EPA, INC.

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
MVMA BASELINE FORECAST JUNE 1977

TABLE 1.05 MILES PER GALLON

LINE	ITEM		1981	1982	1983	1984	1985
1	OVERALL FLEET MILES PER GALLON - WEFA		14.15	14.67	15.25	15.86	16.53
2		%GROWTH	3.30	3.70	3.98	4.04	4.19
3							
4	NEW AUTO MILES PER GALLON (WEFA):						
5							
6	TOTAL		17.28	17.97	18.66	19.36	20.01
7		%GROWTH	4.02	4.03	3.84	3.76	3.33
8							
9	SUBCOMPACT		23.76	24.57	25.28	26.03	26.68
10		%GROWTH	3.32	3.39	2.92	2.94	2.50
11							
12	COMPACT		18.79	19.55	20.34	21.17	21.88
13		%GROWTH	5.86	4.04	4.07	4.05	3.37
14							
15	MID-SIZE		16.31	16.98	17.67	18.40	19.04
16		%GROWTH	4.46	4.06	4.11	4.10	3.49
17							
18	FULL SIZE		15.07	15.71	16.38	17.11	17.78
19		%GROWTH	3.35	4.23	4.28	4.46	3.92
20							
21	LUXURY		14.42	15.05	15.70	16.38	17.02
22		%GROWTH	3.24	4.35	4.34	4.29	3.91
23							
24	NEW AUTO M.P.G. BY FOR/DOM (WEFA):						
25							
26	TOTAL DOMESTIC		16.70	17.39	18.10	18.81	19.47
27		%GROWTH	4.49	4.15	4.08	3.96	3.50
28							
29	TOTAL FOREIGN		23.55	24.22	24.72	25.37	25.89
30		%GROWTH	1.97	2.87	2.08	2.63	2.02
31							
32	DOMESTIC SUBCOMPACT		23.07	23.94	24.65	25.59	26.36
33		%GROWTH	4.70	3.76	3.78	2.97	3.02
34							
35	FOREIGN SUBCOMPACT		24.46	25.20	25.72	26.46	26.99
36		%GROWTH	2.09	3.01	2.06	2.90	1.99
37							
38	DOMESTIC COMPACT		18.65	19.42	20.22	21.04	21.76
39		%GROWTH	6.09	4.09	4.12	4.10	3.39
40							
41	FOREIGN COMPACT		21.83	22.48	23.15	23.83	24.53
42		%GROWTH	2.97	3.01	2.99	2.91	2.95
43							
44	DOMESTIC LUXURY		14.18	14.79	15.45	16.15	16.80
45		%GROWTH	3.27	4.32	4.48	4.49	4.02
46							
47	FOREIGN LUXURY		17.88	18.28	18.76	19.11	19.60
48		%GROWTH	2.82	2.23	2.63	1.89	2.56

A PRODUCT OF WHARTON EFA, INC.

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
ITC BASELINE FORECAST WITH 10% GAS PRICE GROWTH

TABLE 1.06 DOMESTIC AUTO PRICES

LINE	ITEM		1975	1976	1977	1978	1979	1980
1	TOTAL AUTO PRICES:							
2								
3	SUBCOMPACT	DOLLARS:	3747.	3933.	4259.	4550.	4828.	5090.
4		%GROWTH:	12.98	4.95	8.29	6.93	6.01	5.48
5								
6	COMPACT	DOLLARS:	4284.	4485.	4840.	5161.	5477.	5789.
7		%GROWTH:	14.01	4.70	7.90	6.64	6.13	5.69
8								
9	MID-SIZE	DOLLARS:	5171.	5416.	5840.	6225.	6599.	6970.
10		%GROWTH:	14.97	4.74	7.81	6.60	6.01	5.62
11								
12	FULL SIZE	DOLLARS:	5867.	6143.	6620.	7057.	7477.	7891.
13		%GROWTH:	14.79	4.72	7.76	6.61	5.96	5.53
14								
15	LUXURY	DOLLARS:	9023.	9443.	10178.	10836.	11469.	12076.
16		%GROWTH:	15.30	4.65	7.75	6.51	5.84	5.29
17								
18	STATE AND LOCAL TAXES:							
19								
20	SUBCOMPACT	DOLLARS:	158.37	169.29	186.73	203.16	219.17	235.03
21		%GROWTH:	14.73	6.89	10.30	8.80	7.88	7.24
22								
23	COMPACT	DOLLARS:	180.20	192.16	211.17	229.15	247.41	265.98
24		%GROWTH:	15.80	6.64	9.90	8.51	7.97	7.51
25								
26	MID-SIZE	DOLLARS:	218.16	232.68	255.37	276.73	298.32	320.16
27		%GROWTH:	16.77	6.66	9.75	8.36	7.80	7.32
28								
29	FULL SIZE	DOLLARS:	247.13	263.52	289.03	313.14	337.32	361.59
30		%GROWTH:	16.56	6.63	9.68	8.34	7.72	7.19
31								
32	LUXURY	DOLLARS:	383.57	408.66	448.16	485.51	522.60	559.50
33		%GROWTH:	17.15	6.54	9.67	8.33	7.68	7.06
34								
35	TRANSPORTATION CHARGES:							
36								
37	SUBCOMPACT	DOLLARS:	100.60	102.31	106.98	114.66	121.33	130.35
38		%GROWTH:	9.43	1.69	4.53	7.22	5.82	7.43
39								
40	COMPACT	DOLLARS:	134.40	137.10	144.10	150.00	160.50	175.70
41		%GROWTH:	11.53	2.01	5.11	6.87	6.82	6.81
42								
43	MID-SIZE	DOLLARS:	147.77	151.39	161.33	178.25	193.20	213.87
44		%GROWTH:	12.59	2.45	6.57	10.49	8.38	10.70
45								
46	FULL SIZE	DOLLARS:	175.93	180.51	193.11	214.64	233.75	260.31
47		%GROWTH:	13.21	2.60	6.98	11.15	8.90	11.36
48								
49	LUXURY	DOLLARS:	190.80	195.60	208.60	226.90	246.80	268.50
50		%GROWTH:	14.02	2.52	6.65	8.77	8.77	8.79

A PRODUCT OF WHARTON EFA, INC.

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
ITC BASELINE FORECAST WITH 10% GAS PRICE GROWTH

TABLE 1.06 DOMESTIC AUTO PRICES

LINE	ITEM		1981	1982	1983	1984	1985
1	TOTAL AUTO PRICES:						
3	SUBCOMPACT	DOLLARS:	5302.	5529.	5744.	5991.	6248.
4		%GROWTH:	4.16	4.28	3.89	4.30	4.21
6	COMPACT	DOLLARS:	6045.	6318.	6579.	6878.	7186.
7		%GROWTH:	4.43	4.51	4.13	4.54	4.48
9	MID-SIZE	DOLLARS:	7273.	7593.	7895.	8234.	8576.
10		%GROWTH:	4.38	4.40	3.97	4.30	4.15
12	FULL SIZE	DOLLARS:	8227.	8582.	8913.	9286.	9659.
13		%GROWTH:	4.26	4.31	3.86	4.18	4.03
15	LUXURY	DOLLARS:	12563.	13082.	13563.	14114.	14672.
16		%GROWTH:	4.03	4.13	3.68	4.06	3.95
18	STATE AND LOCAL TAXES:						
20	SUBCOMPACT	DOLLARS:	248.93	264.04	278.99	296.06	313.95
21		%GROWTH:	5.91	6.07	5.66	6.12	6.04
23	COMPACT	DOLLARS:	282.41	300.16	317.75	337.75	358.77
24		%GROWTH:	6.18	6.29	5.86	6.29	6.22
26	MID-SIZE	DOLLARS:	339.37	360.06	380.41	403.37	427.26
27		%GROWTH:	6.00	6.10	5.65	6.04	5.92
29	FULL SIZE	DOLLARS:	382.86	405.71	428.05	453.24	479.40
30		%GROWTH:	5.88	5.97	5.50	5.89	5.77
32	LUXURY	DOLLARS:	591.65	626.25	659.83	697.84	737.18
33		%GROWTH:	5.75	5.85	5.36	5.76	5.64
35	TRANSPORTATION CHARGES:						
37	SUBCOMPACT	DOLLARS:	139.15	147.40	155.62	162.93	169.32
38		%GROWTH:	6.75	5.93	5.57	4.70	3.92
40	COMPACT	DOLLARS:	188.50	200.90	214.50	228.80	244.50
41		%GROWTH:	7.29	6.57	6.98	6.67	6.86
43	MID-SIZE	DOLLARS:	234.55	254.36	274.50	292.74	308.92
44		%GROWTH:	9.67	8.45	7.92	6.65	5.53
46	FULL SIZE	DOLLARS:	287.02	312.73	338.96	362.82	384.05
47		%GROWTH:	10.26	8.96	8.39	7.04	5.85
49	LUXURY	DOLLARS:	292.10	317.70	385.60	376.00	409.00
50		%GROWTH:	8.79	8.76	8.78	8.80	8.78

A PRODUCT OF WHARTON EFA, INC.

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
ITC BASELINE FORECAST WITH 10% GAS PRICE GROWTH

TABLE 1.07 DOMESTIC AUTO PRICES - CONTINUED

LINE	I T E M		1975	1976	1977	1978	1979	1980
1	BASE PRICE: FIXED-WTD AVG TOT	DOLLARS	4251.	4839.	5191.	5103.	5397.	5675.
2		%GROWTH	14.99	4.41	7.94	6.51	5.76	5.15
3								
4	SUBCOMPACT	DOLLARS	3163.	3302.	3564.	3796.	4015.	4222.
5		%GROWTH	14.99	4.41	7.94	6.51	5.76	5.15
6								
7	COMPACT	DOLLARS	3367.	3515.	3794.	4041.	4274.	4494.
8		%GROWTH	14.93	4.41	7.94	6.51	5.76	5.15
9								
10	MID-SIZE	DOLLARS	3898.	4070.	4393.	4679.	4949.	5203.
11		%GROWTH	14.98	4.41	7.94	6.51	5.76	5.15
12								
13	FULL SIZE	DOLLARS	4378.	4571.	4934.	5255.	5558.	5845.
14		%GROWTH	15.02	4.41	7.94	6.51	5.76	5.15
15								
16	LUXURY	DOLLARS	7094.	7407.	7996.	8516.	9007.	9471.
17		%GROWTH	15.00	4.41	7.94	6.51	5.76	5.15
18								
19	MAX OPT PRICE: FIXED-WTD AVG	DOLLARS	1305.73	1377.30	1458.59	1535.45	1607.32	1674.50
20		%GROWTH	10.46	5.48	5.90	5.27	4.68	4.18
21								
22	SUBCOMPACT	DOLLARS	1169.61	1233.73	1306.54	1375.37	1439.76	1499.94
23		%GROWTH	6.34	5.48	5.90	5.27	4.68	4.18
24								
25	COMPACT	DOLLARS	1234.59	1302.27	1379.12	1451.78	1519.75	1583.27
26		%GROWTH	8.50	5.48	5.90	5.27	4.68	4.18
27								
28	MID-SIZE	DOLLARS	1286.57	1357.10	1437.19	1512.90	1583.74	1649.94
29		%GROWTH	9.97	5.48	5.90	5.27	4.68	4.18
30								
31	FULL SIZE	DOLLARS	1325.56	1398.22	1480.74	1558.75	1631.73	1699.94
32		%GROWTH	10.51	5.48	5.90	5.27	4.68	4.18
33								
34	LUXURY	DOLLARS	1520.49	1603.84	1698.50	1787.98	1871.69	1949.93
35		%GROWTH	17.41	5.48	5.90	5.27	4.68	4.18
36								
37	VALUE OF OPTIONS INSTALLED:							
38	SUBCOMPACT	DOLLARS	325.89	359.45	401.09	440.01	472.32	503.15
39		%GROWTH	-3.50	10.30	11.58	9.70	7.34	6.53
40								
41	COMPACT	DOLLARS	602.56	648.94	698.28	737.06	791.56	853.00
42		%GROWTH	9.17	6.37	7.70	6.78	7.39	7.76
43								
44	MID-SIZE	DOLLARS	907.43	962.66	1030.01	1091.40	1159.48	1232.90
45		%GROWTH	14.92	6.09	7.00	5.96	6.23	6.34
46								
47	FULL SIZE	DOLLARS	1065.23	1127.99	1203.44	1274.04	1348.13	1428.53
48		%GROWTH	13.72	5.89	6.69	5.87	5.82	5.97
49								
50	LUXURY	DOLLARS	1358.15	1431.09	1521.64	1607.87	1693.28	1777.18
51		%GROWTH	17.20	5.68	6.33	5.67	5.31	4.95

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
ITC BASELINE FORECAST WITH 10% GAS PRICE GROWTH

TABLE 1.07 DOMESTIC AUTO PRICES - CONTINUED

LINE	I T E M		1981	1982	1983	1984	1985
1	BASE PRICE: FIXED-WTD AVG TOT	DOLLARS	5891.	6120.	6335.	6581.	6828.
2		%GROWTH	3.80	3.96	3.45	3.88	3.74
3							
4	SUBCOMPACT	DOLLARS	4382.	4556.	4713.	4896.	5079.
5		%GROWTH	3.80	3.96	3.45	3.88	3.74
6							
7	COMPACT	DOLLARS	4665.	4849.	5017.	5212.	5407.
8		%GROWTH	3.80	3.96	3.45	3.88	3.74
9							
10	MID-SIZE	DOLLARS	5401.	5615.	5809.	6038.	6260.
11		%GROWTH	3.80	3.96	3.45	3.88	3.74
12							
13	FULL SIZE	DOLLARS	6067.	6307.	6524.	6778.	7031.
14		%GROWTH	3.80	3.96	3.45	3.88	3.74
15							
16	LUXURY	DOLLARS	9831.	10219.	10572.	10983.	11394.
17		%GROWTH	3.80	3.96	3.45	3.88	3.74
18							
19	MAX OPT PRICE: FIXED-WTD AVG	DOLLARS	1729.85	1783.91	1833.86	1887.67	1942.42
20		%GROWTH	3.31	3.13	2.80	2.93	2.90
21							
22	SUBCOMPACT	DOLLARS	1549.52	1597.95	1642.69	1690.89	1739.93
23		%GROWTH	3.31	3.13	2.80	2.93	2.90
24							
25	COMPACT	DOLLARS	1635.60	1686.72	1733.95	1784.83	1836.59
26		%GROWTH	3.31	3.13	2.80	2.93	2.90
27							
28	MID-SIZE	DOLLARS	1704.47	1757.74	1806.96	1859.98	1913.93
29		%GROWTH	3.31	3.13	2.80	2.93	2.90
30							
31	FULL SIZE	DOLLARS	1756.12	1811.01	1861.72	1916.34	1971.92
32		%GROWTH	3.31	3.13	2.80	2.93	2.90
33							
34	LUXURY	DOLLARS	2014.37	2077.33	2135.50	2198.16	2261.91
35		%GROWTH	3.31	3.13	2.80	2.93	2.90
36							
37	VALUE OF OPTIONS INSTALLED:						
38	SUBCOMPACT	DOLLARS	531.59	561.90	596.68	636.87	681.34
39		%GROWTH	5.65	5.70	6.18	6.67	7.05
40							
41	COMPACT	DOLLARS	909.68	968.23	1030.41	1099.79	1176.09
42		%GROWTH	6.64	6.88	6.82	6.73	6.94
43							
44	MID-SIZE	DOLLARS	1297.67	1363.72	1431.04	1503.39	1579.38
45		%GROWTH	5.25	5.09	4.94	5.06	5.05
46							
47	FULL SIZE	DOLLARS	1490.65	1556.67	1621.79	1691.78	1764.50
48		%GROWTH	4.68	4.43	4.18	4.32	4.30
49							
50	LUXURY	DOLLARS	1868.37	1918.35	1985.27	2057.55	2132.19
51		%GROWTH	4.01	3.79	3.89	3.64	3.63

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
ITC BASELINE FORECAST WITH 10% GAS PRICE GROWTH

TABLE 1,08 FOREIGN AUTO PRICES

LINE #	I T E M		1975	1976	1977	1978	1979	1980
1	TOTAL AUTO PRICES:							
2								
3	SUBCOMPACT	DOLLARS:	3907,	4222,	4402,	4629,	4869,	5135,
4		%GROWTH:	3,39	8,06	4,26	5,16	5,19	5,48
5								
6	COMPACT	DOLLARS:	6435,	7052,	7385,	7820,	8313,	8875,
7		%GROWTH:	9,93	9,58	4,72	5,89	6,31	6,76
8								
9	LUXURY	DOLLARS:	12692,	14183,	14911,	15936,	17093,	18416,
10		%GROWTH:	13,39	11,43	5,43	6,87	7,26	7,74
11								
12								
13	STATE AND LOCAL TAXES:							
14								
15	SUBCOMPACT	DOLLARS:	165,54	182,29	193,38	206,82	221,33	237,42
16		%GROWTH:	4,79	10,12	6,08	6,95	7,01	7,27
17								
18	COMPACT	DOLLARS:	273,78	305,73	325,78	350,99	379,65	412,43
19		%GROWTH:	11,55	11,67	6,56	7,74	8,16	8,64
20								
21	LUXURY	DOLLARS:	543,50	617,01	661,87	719,64	785,33	860,87
22		%GROWTH:	15,07	13,52	7,27	8,73	9,13	9,62
23								
24								
25	TRANSPORTATION CHARGES:							
26								
27	SUBCOMPACT	DOLLARS:	95,18	96,89	101,56	109,33	116,04	125,12
28		%GROWTH:	9,26	1,80	4,81	7,65	6,18	7,82
29								
30	COMPACT	DOLLARS:	131,10	133,70	140,60	150,20	160,50	171,40
31		%GROWTH:	11,10	1,98	5,16	6,83	6,86	6,79
32								
33	LUXURY	DOLLARS:	177,00	181,50	193,50	210,50	228,90	249,10
34		%GROWTH:	14,86	2,54	6,61	8,79	8,74	8,82
35								
36								
37	BASE PRICES:							
38								
39	SUBCOMPACT	DOLLARS:	3320,	3583,	3706,	3873,	4059,	4270,
40		%GROWTH:	3,88	7,92	3,42	4,51	4,82	5,19
41								
42	COMPACT	DOLLARS:	5428,	5971,	6228,	6582,	6981,	7438,
43		%GROWTH:	9,91	10,02	4,30	5,68	6,07	6,54
44								
45	LUXURY	DOLLARS:	10617,	11913,	12534,	13398,	14386,	15529,
46		%GROWTH:	12,81	12,21	5,21	6,89	7,37	7,95

A PRODUCT OF WHARTON EFA, INC.

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
ITC BASELINE FORECAST WITH 10% GAS PRICE GROWTH

TABLE 1.08 FOREIGN AUTO PRICES

LINE	I T E M		1981	1982	1983	1984	1985
1	TOTAL AUTO PRICES:						
2							
3	SUBCOMPACT	DOLLARS:	5409.	5684.	5964.	6246.	6532.
4		%GROWTH:	5.32	5.08	4.93	4.72	4.59
5							
6	COMPACT	DOLLARS:	9461.	10054.	10660.	11273.	11902.
7		%GROWTH:	6.60	6.27	6.02	5.75	5.58
8							
9	LUXURY	DOLLARS:	19812.	21241.	22702.	24185.	25706.
10		%GROWTH:	7.58	7.21	6.88	6.53	6.29
11							
12							
13	STATE AND LOCAL TAXES:						
14							
15	SUBCOMPACT	DOLLARS:	254.34	271.89	290.22	309.23	329.13
16		%GROWTH:	7.13	6.90	6.74	6.55	6.43
17							
18	COMPACT	DOLLARS:	447.30	483.69	521.72	561.29	602.82
19		%GROWTH:	8.45	8.14	7.86	7.58	7.40
20							
21	LUXURY	DOLLARS:	942.20	1027.69	1117.33	1210.78	1308.99
22		%GROWTH:	9.45	9.07	8.72	8.36	8.11
23							
24							
25	TRANSPORTATION CHARGES:						
26							
27	SUBCOMPACT	DOLLARS:	133.98	142.29	150.56	157.92	164.35
28		%GROWTH:	7.08	6.20	5.81	4.89	4.07
29							
30	COMPACT	DOLLARS:	183.90	195.60	209.00	223.20	238.50
31		%GROWTH:	7.29	6.36	6.85	6.79	6.85
32							
33	LUXURY	DOLLARS:	271.00	294.70	320.60	348.80	379.40
34		%GROWTH:	8.79	8.75	8.79	8.80	8.77
35							
36							
37	BASE PRICES:						
38							
39	SUBCOMPACT	DOLLARS:	4489.	4708.	4926.	5142.	5358.
40		%GROWTH:	5.13	4.88	4.64	4.37	4.19
41							
42	COMPACT	DOLLARS:	7920.	8406.	8898.	9389.	9884.
43		%GROWTH:	6.47	6.15	5.85	5.51	5.28
44							
45	LUXURY	DOLLARS:	16750.	18000.	19279.	20567.	21885.
46		%GROWTH:	7.86	7.46	7.10	6.69	6.41

A PRODUCT OF WHARTON EFA, INC.

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
ITC BASELINE FORECAST WITH 10% GAS PRICE GROWTH

TABLE 1,09 USED CAR MARKET

LINE	I T E M		1975	1976	1977	1978	1979	1980
1	AVERAGE WHOLESALE PRICE	DOLLARS	2008,71	2158,37	2242,45	2416,73	2602,18	2779,61
2		%GROWTH	5,20	7,45	3,90	7,77	7,67	6,82
3								
4								
5	PRICE OF 1 YR OLD CAR/NEW CAR:							
6								
7	SUBCOMPACT	RATIO	0,873	0,860	0,798	0,787	0,804	0,804
8		%GROWTH	3,01	-1,51	-7,21	-1,32	2,17	-0,05
9								
10	COMPACT	RATIO	0,824	0,739	0,731	0,710	0,725	0,724
11		%GROWTH	3,32	-10,26	-1,12	-2,86	2,05	-0,06
12								
13	MID-SIZE	RATIO	0,636	0,704	0,635	0,642	0,648	0,651
14		%GROWTH	-10,34	10,85	-9,88	1,06	0,94	0,55
15								
16	FULL SIZE	RATIO	0,646	0,695	0,591	0,588	0,613	0,616
17		%GROWTH	0,18	7,63	-14,86	-0,62	4,31	0,45
18								
19	LUXURY	RATIO	0,715	0,743	0,689	0,687	0,700	0,700
20		%GROWTH	4,59	3,97	-7,29	-0,29	1,90	0,07
21								
22								
23	TOTAL USED CARS PURCHASED	MILL AUTOS	16,94	18,66	15,78	15,39	16,77	17,39
24		%GROWTH	22,74	10,17	-15,42	-2,49	8,98	3,68

A PRODUCT OF WHARTON EFA, INC.

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
ITC BASELINE FORECAST WITH 10% GAS PRICE GROWTH

TABLE 1.09 USED CAR MARKET

LINE	I T E M		1981	1982	1983	1984	1985
1	AVERAGE WHOLESALE PRICE	DOLLARS	2933.67	3076.41	3214.23	3343.24	3496.23
2		%GROWTH	5.54	4.87	4.48	4.01	4.58
3							
4							
5	PRICE OF 1 YR OLD CAR/NEW CAR:						
6							
7	SUBCOMPACT	RATIO	0.798	0.798	0.797	0.782	0.769
8		%GROWTH	-0.70	-0.03	-0.19	-1.86	-1.60
9							
10	COMPACT	RATIO	0.712	0.708	0.705	0.695	0.686
11		%GROWTH	-1.78	-0.45	-0.50	-1.35	-1.34
12							
13	MID-SIZE	RATIO	0.653	0.651	0.652	0.647	0.645
14		%GROWTH	0.31	-0.30	0.17	-0.78	-0.35
15							
16	FULL SIZE	RATIO	0.619	0.618	0.620	0.601	0.588
17		%GROWTH	0.50	-0.10	0.27	-3.14	-2.12
18							
19	LUXURY	RATIO	0.701	0.701	0.702	0.692	0.685
20		%GROWTH	0.14	-0.05	0.12	-1.47	-1.00
21							
22							
23	TOTAL USED CARS PURCHASED	MILL AUTOS	17.33	17.62	17.99	18.46	18.18
24		%GROWTH	-0.36	1.69	2.10	2.62	-1.52

A PRODUCT OF WHARTON EFA, INC.

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
ITC BASELINE FORECAST WITH 10% GAS PRICE GROWTH

TABLE 1.10 UNADJUSTED SHARES BY SIZE CLASS

LINE	ITEM	1975	1976	1977	1978	1979	1980
1	DESIRED SHARES IN STOCK						
2	BEFORE RECONCILING SUM TO 1.0						
3							
4	SUBCOMPACT & COMPACT	0.4210	0.4022	0.3940	0.3921	0.3937	0.3975
5							
6	MID-SIZE	0.2657	0.2691	0.2696	0.2709	0.2712	0.2719
7							
8	FULL SIZE	0.2253	0.2579	0.2728	0.2770	0.2775	0.2664
9							
10	LUXURY	0.0922	0.0923	0.0920	0.0920	0.0928	0.0941
11							
12	TOTAL	1.0041	1.0216	1.0283	1.0319	1.0352	1.0298
13							
14							
15	DESIRED SHARES IN NEW REGISTRATIONS						
16	BEFORE RECONCILING SUM TO 1.0						
17							
18	SUBCOMPACT & COMPACT	0.5093	0.4172	0.4122	0.4028	0.3995	0.4054
19							
20	MID-SIZE	0.2281	0.3008	0.2852	0.2810	0.2758	0.2753
21							
22	FULL SIZE	0.1686	0.1863	0.2252	0.2417	0.2511	0.2433
23							
24	LUXURY	0.0941	0.0958	0.0940	0.0934	0.0944	0.0961
25							
26	TOTAL	1.0001	1.0001	1.0166	1.0188	1.0203	1.0201

A PRODUCT OF WHARTON EFA, INC.

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
ITC BASELINE FORECAST WITH 10% GAS PRICE GROWTH

TABLE 1.10 UNADJUSTED SHARES BY SIZE CLASS

LINE	ITEM	1981	1982	1983	1984	1985
1	DESIRED SHARES IN STOCK					
2	BEFORE RECONCILING SUM TO 1.0					
3						
4	SUBCOMPACT & COMPACT	0.4009	0.4032	0.4031	0.3997	0.3966
5						
6	MID-SIZE	0.2729	0.2732	0.2739	0.2745	0.2749
7						
8	FULL SIZE	0.2555	0.2512	0.2502	0.2533	0.2545
9						
10	LUXURY	0.0954	0.0966	0.0979	0.0994	0.1012
11						
12	TOTAL	1.0246	1.0243	1.0251	1.0270	1.0272
13						
14						
15	DESIRED SHARES IN NEW REGISTRATIONS					
16	BEFORE RECONCILING SUM TO 1.0					
17						
18	SUBCOMPACT & COMPACT	0.4111	0.4130	0.4113	0.4051	0.4010
19						
20	MID-SIZE	0.2758	0.2725	0.2703	0.2685	0.2678
21						
22	FULL SIZE	0.2348	0.2346	0.2378	0.2453	0.2483
23						
24	LUXURY	0.0979	0.0996	0.1012	0.1032	0.1055
25						
26	TOTAL	1.0197	1.0196	1.0203	1.0219	1.0226

A PRODUCT OF WHARTON EFA, INC.

APPENDIX B

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
BASE CASE VS. FIT/FER PROPOSAL

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX/REBATE POLICY

TABLE 3.00 SUMMARY

LINE	I T E M		1975	1976	1977	1978	1979	1980
1	DESIRED STOCK OF AUTOS	MILL AUTOS						
2	WITH TAX/REB		93,743	96,770	99,853	103,170	105,696	107,469
3	BASELINE		93,743	96,770	99,853	102,845	105,199	107,181
4	DIFFERENCE		0,0	0,0	0,0	0,325	0,298	0,289
5	% DIFFERENCE		0,0	0,0	0,0	0,32	0,28	0,27
6								
7	ACTUAL YR-END STOCK OF AUTOS	MILL AUTOS						
8	WITH TAX/REB		96,73	99,69	102,11	105,27	107,32	108,72
9	BASELINE		96,73	99,69	102,11	105,01	107,04	108,46
10	DIFFERENCE		0,0	0,0	0,0	0,26	0,28	0,26
11	% DIFFERENCE		0,0	0,0	0,0	0,25	0,26	0,24
12								
13	NEW REGISTRATIONS OF AUTOS	MILL AUTOS						
14	WITH TAX/REB		8,350	9,868	10,953	11,355	11,370	11,847
15	BASELINE		8,350	9,868	10,953	11,112	11,349	11,785
16	DIFFERENCE		0,0	0,0	0,0	0,243	0,020	0,062
17	% DIFFERENCE		0,0	0,0	0,0	2,18	0,18	0,53
18								
19	FOREIGN NEW REGIS,	MILL AUTOS						
20	WITH TAX/REB		1,517	1,463	1,540	1,976	1,796	1,730
21	BASELINE		1,517	1,463	1,540	1,532	1,447	1,449
22	DIFFERENCE		0,0	0,0	0,0	0,444	0,349	0,281
23	% DIFFERENCE		0,0	0,0	0,0	28,98	24,10	19,43
24								
25	DOMESTIC NEW REGIS,	MILL AUTOS						
26	WITH TAX/REB		6,833	8,405	9,413	9,379	9,574	10,117
27	BASELINE		6,833	8,405	9,413	9,580	9,902	10,336
28	DIFFERENCE		0,0	0,0	0,0	-0,201	-0,329	-0,219
29	% DIFFERENCE		0,0	0,0	0,0	-2,10	-3,32	-2,12
30								
31	VEHICLE MILES TRAVELED	BILL MILES						
32	WITH TAX/REB		1027,4	1029,0	1032,8	1041,5	1059,7	1076,8
33	BASELINE		1027,4	1029,0	1032,8	1040,2	1055,2	1071,5
34	DIFFERENCE		0,0	0,0	0,0	1,1	4,5	5,2
35	% DIFFERENCE		0,0	0,0	0,0	0,11	0,42	0,49
36								
37	SCRAPPAGE OF AUTOS	MILL AUTOS						
38	WITH TAX/REB		5,588	6,909	8,531	8,190	9,325	10,441
39	BASELINE		5,588	6,909	8,531	8,208	9,324	10,365
40	DIFFERENCE		0,0	0,0	0,0	-0,017	0,001	0,076
41	% DIFFERENCE		0,0	0,0	0,0	-0,21	0,02	0,74
42								
43	NEW DOMESTIC EPA TEST M,P,G,							
44	WITH TAX/REB		16,14	16,95	17,81	19,01	19,98	21,00
45	BASELINE		16,14	16,95	17,81	18,68	19,68	20,72
46	DIFFERENCE		0,0	0,0	0,0	0,33	0,29	0,27
47	% DIFFERENCE		0,0	0,0	0,0	1,78	1,49	1,32

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX/REBATE POLICY

TABLE 3.00 SUMMARY

LINE	I T E M		1981	1982	1983	1984	1985
1	DESIRED STOCK OF AUTOS	MILL AUTOS					
2	WITH TAX/REB		109,553	111,518	113,309	115,224	117,215
3	BASELINE		109,305	111,256	113,096	115,021	117,056
4	DIFFERENCE		0,248	0,263	0,213	0,203	0,159
5	% DIFFERENCE		0,23	0,24	0,19	0,18	0,14
6							
7	ACTUAL YR-END STOCK OF AUTOS	MILL AUTOS					
8	WITH TAX/REB		109,74	110,95	112,83	114,96	117,82
9	BASELINE		109,59	110,76	112,29	114,85	117,74
10	DIFFERENCE		0,15	0,20	0,14	0,11	0,08
11	% DIFFERENCE		0,14	0,18	0,12	0,09	0,07
12							
13	NEW REGISTRATIONS OF AUTOS	MILL AUTOS					
14	WITH TAX/REB		11,949	12,252	12,468	13,538	13,971
15	BASELINE		12,001	12,218	12,544	13,599	14,000
16	DIFFERENCE		-0,052	0,038	-0,076	-0,061	-0,029
17	% DIFFERENCE		-0,43	0,31	-0,60	-0,45	-0,21
18							
19	FOREIGN NEW REGIS,	MILL AUTOS					
20	WITH TAX/REB		1,617	1,697	1,665	1,813	1,814
21	BASELINE		1,388	1,407	1,417	1,495	1,515
22	DIFFERENCE		0,230	0,290	0,248	0,318	0,299
23	% DIFFERENCE		16,88	20,60	17,50	21,27	19,74
24							
25	DOMESTIC NEW REGIS,	MILL AUTOS					
26	WITH TAX/REB		10,331	10,556	10,804	11,725	12,157
27	BASELINE		10,617	10,807	11,127	12,104	12,485
28	DIFFERENCE		-0,286	-0,252	-0,324	-0,379	-0,328
29	% DIFFERENCE		-2,69	-2,33	-2,91	-3,13	-2,62
30							
31	VEHICLE MILES TRAVELED	BILL MILES					
32	WITH TAX/REB		1092,2	1108,6	1127,0	1148,8	1180,1
33	BASELINE		1086,7	1103,5	1121,5	1145,9	1175,9
34	DIFFERENCE		5,4	5,2	5,5	4,8	4,21
35	% DIFFERENCE		0,50	0,47	0,49	0,42	0,35
36							
37	SCRAPPAGE OF AUTOS	MILL AUTOS					
38	WITH TAX/REB		10,926	11,082	10,996	11,005	11,105
39	BASELINE		10,867	11,050	11,012	11,035	11,109
40	DIFFERENCE		0,059	-0,007	-0,016	-0,030	-0,004
41	% DIFFERENCE		0,54	-0,07	-0,14	-0,27	-0,04
42							
43	NEW DOMESTIC EPA TEST M,P,G,						
44	WITH TAX/REB		21,97	22,88	23,81	24,80	25,63
45	BASELINE		21,67	22,57	23,50	24,44	25,31
46	DIFFERENCE		0,30	0,31	0,31	0,36	0,33
47	% DIFFERENCE		1,36	1,36	1,32	1,48	1,29

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX/REBATE POLICY

TABLE 3.00 SUMMARY - CONTINUED

LINE	I T E M	1975	1976	1977	1978	1979	1980
1	NEW AUTOS FLEET M,P,G, (EPA)						
2	WITH TAX/REB	17,17	17,82	18,64	20,07	20,91	21,85
3	BASELINE	17,17	17,82	18,64	19,51	20,43	21,44
4	DIFFERENCE	0,0	0,0	0,0	0,56	0,48	0,41
5	% DIFFERENCE	0,0	0,0	0,0	2,87	2,36	1,92
6							
7	NEW DOMESTIC AUTOS M,P,G,						
8	WITH TAX/REB	16,14	16,95	17,81	19,01	19,98	21,00
9	BASELINE	16,14	16,95	17,81	18,68	19,68	20,72
10	DIFFERENCE	0,0	0,0	0,0	0,33	0,29	0,27
11	% DIFFERENCE	0,0	0,0	0,0	1,78	1,49	1,32
12							
13	NEW FOREIGN AUTOS M,P,G,						
14	WITH TAX/REB	24,12	25,24	26,01	27,29	27,88	28,67
15	BASELINE	24,12	25,24	26,01	27,05	27,66	28,48
16	DIFFERENCE	0,0	0,0	0,0	0,24	0,23	0,20
17	% DIFFERENCE	0,0	0,0	0,0	0,90	0,82	0,70
18							
19							
20	SHARE OF NEW REGISTRATIONS;						
21							
22	SUBCOMPACT						
23	WITH TAX/REB	0,291	0,238	0,223	0,289	0,265	0,248
24	BASELINE	0,291	0,238	0,223	0,220	0,206	0,199
25	DIFFERENCE	0,0	0,0	0,0	0,069	0,059	0,045
26	% DIFFERENCE	0,0	0,0	0,0	31,42	28,67	22,61
27							
28	COMPACT						
29	WITH TAX/REB	0,219	0,179	0,183	0,159	0,173	0,195
30	BASELINE	0,219	0,179	0,183	0,176	0,186	0,198
31	DIFFERENCE	0,0	0,0	0,0	-0,017	-0,013	-0,004
32	% DIFFERENCE	0,0	0,0	0,0	-9,53	-6,75	-1,86
33							
34	MID-SIZE						
35	WITH TAX/REB	0,228	0,301	0,281	0,287	0,279	0,277
36	BASELINE	0,228	0,301	0,281	0,276	0,270	0,270
37	DIFFERENCE	0,0	0,0	0,0	0,011	0,009	0,007
38	% DIFFERENCE	0,0	0,0	0,0	4,02	3,29	2,56
39							
40	FULL-SIZE						
41	WITH TAX/REB	0,169	0,186	0,222	0,175	0,192	0,191
42	BASELINE	0,169	0,186	0,222	0,237	0,246	0,239
43	DIFFERENCE	0,0	0,0	0,0	-0,062	-0,054	-0,047
44	% DIFFERENCE	0,0	0,0	0,0	-26,21	-22,04	-19,80
45							
46	LUXURY						
47	WITH TAX/REB	0,094	0,096	0,092	0,090	0,091	0,093
48	BASELINE	0,094	0,096	0,092	0,092	0,093	0,094
49	DIFFERENCE	0,0	0,0	0,0	-0,001	-0,001	-0,001
50	% DIFFERENCE	0,0	0,0	0,0	-1,28	-1,14	-1,06

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX/REBATE POLICY

TABLE 3.00 SUMMARY - CONTINUED

LINE	I T E M	1981	1982	1983	1984	1985
1	NEW AUTOS FLEET M,P,G, (EPA)					
2	WITH TAX/REB	22,74	23,68	24,56	25,56	26,36
3	BASELINE	22,33	23,24	24,14	25,06	25,91
4	DIFFERENCE	0,41	0,44	0,42	0,50	0,45
5	% DIFFERENCE	1,83	1,90	1,76	1,98	1,72
6						
7	NEW DOMESTIC AUTOS M,P,G,					
8	WITH TAX/REB	21,97	22,88	23,81	24,80	25,63
9	BASELINE	21,67	22,57	23,50	24,44	25,31
10	DIFFERENCE	0,30	0,31	0,31	0,36	0,33
11	% DIFFERENCE	1,36	1,36	1,32	1,48	1,29
12						
13	NEW FOREIGN AUTOS M,P,G,					
14	WITH TAX/REB	29,30	30,24	30,90	31,84	32,53
15	BASELINE	29,11	30,00	30,69	31,57	32,28
16	DIFFERENCE	0,19	0,24	0,21	0,27	0,25
17	% DIFFERENCE	0,64	0,79	0,69	0,86	0,79
18						
19						
20	SHARE OF NEW REGISTRATIONS:					
21						
22	SUBCOMPACT					
23	WITH TAX/REB	0,227	0,238	0,223	0,223	0,215
24	BASELINE	0,18[illegible]	0,187	0,182	0,176	0,172
25	DIFFERENCE	0,039	0,046	0,040	0,047	0,042
26	% DIFFERENCE	20,87	24,74	22,12	26,81	24,58
27						
28	COMPACT					
29	WITH TAX/REB	0,218	0,213	0,223	0,221	0,222
30	BASELINE	0,215	0,218	0,221	0,220	0,220
31	DIFFERENCE	0,003	-0,005	0,002	0,000	0,002
32	% DIFFERENCE	1,21	-2,13	0,85	0,13	0,98
33						
34	MID-SIZE					
35	WITH TAX/REB	0,276	0,272	0,270	0,271	0,266
36	BASELINE	0,270	0,267	0,265	0,263	0,262
37	DIFFERENCE	0,006	0,005	0,005	0,009	0,004
38	% DIFFERENCE	2,17	1,94	1,76	3,37	1,67
39						
40	FULL-SIZE					
41	WITH TAX/REB	0,184	0,184	0,187	0,185	0,195
42	BASELINE	0,230	0,230	0,233	0,240	0,243
43	DIFFERENCE	-0,047	-0,046	-0,046	-0,055	-0,048
44	% DIFFERENCE	-20,28	-19,91	-19,69	-22,97	-19,66
45						
46	LUXURY					
47	WITH TAX/REB	0,095	0,097	0,098	0,100	0,102
48	BASELINE	0,096	0,098	0,099	0,101	0,103
49	DIFFERENCE	-0,001	-0,001	-0,001	-0,001	-0,001
50	% DIFFERENCE	-1,06	-1,10	-1,06	-1,22	-1,12

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX/REBATE POLICY

TABLE 3.01 SHARES BY SIZE CLASS

LINE	I T E M	1975	1976	1977	1978	1979	1980
1	SHARES OF DESIRED STOCK:						
2							
3	SUBCOMPACTS						
4	WITH TAX/REB	0.231	0.204	0.204	0.246	0.238	0.231
5	BASELINE	0.231	0.204	0.204	0.205	0.200	0.198
6	DIFFERENCE	0.0	0.0	0.0	0.041	0.039	0.033
7	% DIFFERENCE	0.0	0.0	0.0	20.17	19.30	16.74
8							
9	COMPACTS						
10	WITH TAX/REB	0.188	0.189	0.178	0.168	0.173	0.184
11	BASELINE	0.188	0.189	0.178	0.174	0.179	0.187
12	DIFFERENCE	0.0	0.0	0.0	-0.006	-0.006	-0.002
13	% DIFFERENCE	0.0	0.0	0.0	-3.51	-3.30	-1.21
14							
15	MID-SIZE						
16	WITH TAX/REB	0.264	0.263	0.261	0.267	0.266	0.267
17	BASELINE	0.264	0.263	0.261	0.262	0.261	0.263
18	DIFFERENCE	0.0	0.0	0.0	0.005	0.005	0.004
19	% DIFFERENCE	0.0	0.0	0.0	1.94	1.73	1.58
20							
21	FULL SIZE						
22	WITH TAX/REB	0.224	0.252	0.265	0.228	0.231	0.224
23	BASELINE	0.224	0.292	0.265	0.268	0.267	0.258
24	DIFFERENCE	0.0	0.0	0.0	-0.039	-0.036	-0.034
25	% DIFFERENCE	0.0	0.0	0.0	-14.72	-13.50	-13.23
26							
27	LUXURY						
28	WITH TAX/REB	0.092	0.092	0.092	0.091	0.092	0.093
29	BASELINE	0.092	0.092	0.092	0.092	0.093	0.094
30	DIFFERENCE	0.0	0.0	0.0	-0.001	-0.001	-0.001
31	% DIFFERENCE	0.0	0.0	0.0	-1.00	-1.05	-1.00

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX/REBATE POLICY

TABLE 3.01 SHARES BY SIZE CLASS

LINE	I T E M	1981	1982	1983	1984	1985
1	SHARES OF DESIRED STOCK:					
2						
3	SUBCOMPACTS					
4	WITH TAX/REB	0.225	0.210	0.224	0.224	0.218
5	BASELINE	0.193	0.192	0.188	0.183	0.179
6	DIFFERENCE	0.032	0.037	0.036	0.041	0.040
7	% DIFFERENCE	16.60	19.05	18.98	22.51	22.17
8						
9	COMPACTS					
10	WITH TAX/REB	0.198	0.197	0.204	0.205	0.207
11	BASELINE	0.197	0.200	0.204	0.205	0.206
12	DIFFERENCE	0.001	-0.003	0.000	-0.001	0.001
13	% DIFFERENCE	0.37	-1.65	0.03	-0.28	0.24
14						
15	MID-SIZE					
16	WITH TAX/REB	0.270	0.270	0.271	0.273	0.271
17	BASELINE	0.266	0.266	0.267	0.267	0.267
18	DIFFERENCE	0.004	0.004	0.004	0.006	0.005
19	% DIFFERENCE	1.53	1.53	1.53	2.42	1.72
20						
21	FULL SIZE					
22	WITH TAX/REB	0.213	0.208	0.205	0.200	0.203
23	BASELINE	0.249	0.245	0.243	0.246	0.247
24	DIFFERENCE	-0.036	-0.037	-0.039	-0.046	-0.044
25	% DIFFERENCE	-14.42	-15.16	-15.94	-18.64	-17.63
26						
27	LUXURY					
28	WITH TAX/REB	0.094	0.096	0.097	0.098	0.100
29	BASELINE	0.095	0.097	0.098	0.099	0.101
30	DIFFERENCE	-0.001	-0.001	-0.001	-0.001	-0.001
31	% DIFFERENCE	-1.02	-1.06	-1.07	-1.22	-1.13

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX/REBATE POLICY

TABLE 3.02 SHARES BY SIZE CLASS - CONTINUED

LINE	ITEM	1975	1976	1977	1978	1979	1980
1	SHARES OF ACTUAL YR-END STOCKS						
2							
3	SUBCOMPACT						
4	WITH TAX/REB	0.168	0.180	0.190	0.206	0.218	0.227
5	BASELINE	0.168	0.180	0.190	0.198	0.204	0.208
6	DIFFERENCE	0.0	0.0	0.0	0.007	0.014	0.018
7	% DIFFERENCE	0.0	0.0	0.0	3.77	6.61	8.70
8							
9	COMPACT						
10	WITH TAX/REB	0.175	0.177	0.179	0.178	0.178	0.180
11	BASELINE	0.175	0.177	0.179	0.179	0.181	0.183
12	DIFFERENCE	0.0	0.0	0.0	-0.002	-0.003	-0.003
13	% DIFFERENCE	0.0	0.0	0.0	-1.01	-1.71	-1.87
14							
15	MID-SIZE						
16	WITH TAX/REB	0.231	0.236	0.240	0.245	0.250	0.250
17	BASELINE	0.231	0.236	0.240	0.244	0.248	0.252
18	DIFFERENCE	0.0	0.0	0.0	0.001	0.002	0.003
19	% DIFFERENCE	0.0	0.0	0.0	0.52	0.88	1.15
20							
21	FULL SIZE						
22	WITH TAX/REB	0.338	0.318	0.301	0.281	0.264	0.248
23	BASELINE	0.338	0.318	0.301	0.288	0.276	0.265
24	DIFFERENCE	0.0	0.0	0.0	-0.007	-0.012	-0.017
25	% DIFFERENCE	0.0	0.0	0.0	-2.36	-4.47	-6.51
26							
27	LUXURY						
28	WITH TAX/REB	0.087	0.089	0.090	0.090	0.091	0.091
29	BASELINE	0.087	0.089	0.090	0.090	0.091	0.092
30	DIFFERENCE	0.0	0.0	0.0	-0.000	-0.000	-0.000
31	% DIFFERENCE	0.0	0.0	0.0	-0.14	-0.26	-0.37

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX/REBATE POLICY

TABLE 3.02 SHARES BY SIZE CLASS - CONTINUED

LINE	I T E M	1981	1982	1983	1984	1985
1	SHARES OF ACTUAL YR-END STOCKS					
2						
3	SUBCOMPACT					
4	WITH TAX/REB	0.232	0.236	0.237	0.237	0.235
5	BASELINE	0.210	0.209	0.207	0.203	0.198
6	DIFFERENCE	0.022	0.026	0.030	0.034	0.037
7	% DIFFERENCE	10.51	12.67	14.53	16.80	18.66
8						
9	COMPACT					
10	WITH TAX/REB	0.184	0.188	0.193	0.197	0.201
11	BASELINE	0.187	0.192	0.196	0.200	0.204
12	DIFFERENCE	-0.003	-0.003	-0.003	-0.003	-0.002
13	% DIFFERENCE	-1.64	-1.82	-1.61	-1.46	-1.17
14						
15	MID-SIZE					
16	WITH TAX/REB	0.259	0.263	0.266	0.269	0.270
17	BASELINE	0.256	0.259	0.262	0.264	0.265
18	DIFFERENCE	0.003	0.004	0.004	0.005	0.005
19	% DIFFERENCE	1.35	1.51	1.63	1.92	1.99
20						
21	FULL SIZE					
22	WITH TAX/REB	0.233	0.220	0.210	0.203	0.198
23	BASELINE	0.255	0.247	0.241	0.238	0.237
24	DIFFERENCE	-0.022	-0.026	-0.031	-0.035	-0.039
25	% DIFFERENCE	-8.62	-10.70	-12.86	-14.88	-16.40
26						
27	LUXURY					
28	WITH TAX/REB	0.092	0.093	0.093	0.094	0.096
29	BASELINE	0.092	0.093	0.094	0.095	0.096
30	DIFFERENCE	-0.000	-0.001	-0.001	-0.001	-0.001
31	% DIFFERENCE	-0.48	-0.59	-0.69	-0.81	-0.90

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX/REBATE POLICY

TABLE 3.03 SHARES BY SIZE CLASS - CONTINUED

LINE	ITEM	1975	1976	1977	1978	1979	1980
1	DOMESTIC SHARE OF NEW REGISTRATIONS						
2							
3	DOMESTIC SHARE OF TOTAL						
4	WITH TAX/REB	0.818	0.852	0.859	0.826	0.842	0.854
5	BASELINE	0.818	0.852	0.859	0.862	0.872	0.877
6	DIFFERENCE	0.0	0.0	0.0	-0.036	-0.030	-0.023
7	% DIFFERENCE	0.0	0.0	0.0	-4.19	-3.49	-2.64
8							
9	DOMESTIC SHARE OF SUBCOMPACTS						
10	WITH TAX/REB	0.4694	0.4573	0.4600	0.4600	0.4700	0.4800
11	BASELINE	0.4694	0.4573	0.4600	0.4600	0.4700	0.4800
12	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
13	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
14							
15	DOMESTIC SHARE OF COMPACTS						
16	WITH TAX/REB	0.9264	0.9464	0.9400	0.9400	0.9450	0.9450
17	BASELINE	0.9264	0.9464	0.9400	0.9400	0.9450	0.9450
18	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
19	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
20							
21	DOMESTIC SHARE OF LUXURY						
22	WITH TAX/REB	0.8792	0.9005	0.9000	0.9050	0.9100	0.9100
23	BASELINE	0.8792	0.9005	0.9000	0.9050	0.9100	0.9100
24	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
25	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX/REBATE POLICY

TABLE 3.03 SHARES BY SIZE CLASS - CONTINUED

LINE	I T E M	1981	1982	1983	1984	1985
1	DOMESTIC SHARE OF NEW REGISTRATIONS					
2						
3	DOMESTIC SHARE OF TOTAL					
4	WITH TAX/REB	0.865	0.862	0.866	0.866	0.870
5	BASELINE	0.885	0.885	0.887	0.890	0.892
6	DIFFERENCE	-0.020	-0.023	-0.021	-0.024	-0.022
7	% DIFFERENCE	-2.27	-2.63	-2.32	-2.69	-2.42
8						
9	DOMESTIC SHARE OF SUBCOMPACTS					
10	WITH TAX/REB	0.4900	0.4900	0.4900	0.4900	0.4900
11	BASELINE	0.4900	0.4900	0.4900	0.4900	0.4900
12	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
13	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0
14						
15	DOMESTIC SHARE OF COMPACTS					
16	WITH TAX/REB	0.9500	0.9500	0.9500	0.9500	0.9500
17	BASELINE	0.9500	0.9500	0.9500	0.9500	0.9500
18	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
19	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0
20						
21	DOMESTIC SHARE OF LUXURY					
22	WITH TAX/REB	0.9100	0.9100	0.9100	0.9100	0.9100
23	BASELINE	0.9100	0.9100	0.9100	0.9100	0.9100
24	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
25	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX/REBATE POLICY

TABLE 3,04 NEW REGISTRATIONS BY SIZE CLASS

LINE	I T E M	1975	1976	1977	1978	1979	1980
1	NEW REGISTRATIONS						
2							
3	SUBCOMPACT MILL AUTOS						
4	WITH TAX/REB	2,427	2,348	2,441	3,278	3,008	2,892
5	BASELINE	2,427	2,348	2,441	2,441	2,333	2,346
6	DIFFERENCE	0,0	0,0	0,0	0,837	0,674	0,546
7	% DIFFERENCE	0,0	0,0	0,0	34,29	28,90	23,25
8							
9	COMPACT MILL AUTOS						
10	WITH TAX/REB	1,825	1,768	1,999	1,805	1,971	2,305
11	BASELINE	1,825	1,768	1,999	1,952	2,110	2,337
12	DIFFERENCE	0,0	0,0	0,0	-0,148	-0,139	-0,031
13	% DIFFERENCE	0,0	0,0	0,0	-7,56	-6,58	-1,35
14							
15	MID-SIZE MILL AUTOS						
16	WITH TAX/REB	1,905	2,968	3,073	3,257	3,170	3,279
17	BASELINE	1,905	2,968	3,073	3,064	3,063	3,180
18	DIFFERENCE	0,0	0,0	0,0	0,193	0,106	0,099
19	% DIFFERENCE	0,0	0,0	0,0	6,29	3,47	3,10
20							
21	FULL SIZE MILL AUTOS						
22	WITH TAX/REB	1,408	1,838	2,427	1,988	2,181	2,266
23	BASELINE	1,408	1,838	2,427	2,636	2,793	2,811
24	DIFFERENCE	0,0	0,0	0,0	-0,648	-0,612	-0,545
25	% DIFFERENCE	0,0	0,0	0,0	-24,60	-21,90	-19,38
26							
27	LUXURY MILL AUTOS						
28	WITH TAX/REB	0,786	0,945	1,013	1,027	1,040	1,104
29	BASELINE	0,786	0,945	1,013	1,018	1,050	1,111
30	DIFFERENCE	0,0	0,0	0,0	0,009	-0,010	-0,006
31	% DIFFERENCE	0,0	0,0	0,0	0,87	-0,97	-0,54

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
MEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX/REBATE POLICY

TABLE 3.04 NEW REGISTRATIONS BY SIZE CLASS

LINE	I T E M	1981	1982	1983	1984	1985
1	NEW REGISTRATIONS:					
2						
3	SUBCOMPACT MILL AUTOS					
4	WITH TAX/REB	2,716	2,862	2,776	3,023	3,001
5	BASELINE	2,257	2,287	2,287	2,395	2,414
6	DIFFERENCE	0,459	0,575	0,489	0,628	0,587
7	% DIFFERENCE	20,34	25,13	21,39	26,24	24,33
8						
9	COMPACT MILL AUTOS					
10	WITH TAX/REB	2,602	2,611	2,777	2,987	3,099
11	BASELINE	2,582	2,660	2,771	2,996	3,075
12	DIFFERENCE	0,020	-0,048	0,007	-0,009	0,024
13	% DIFFERENCE	0,77	-1,82	0,24	-0,32	0,77
14						
15	MID-SIZE MILL AUTOS					
16	WITH TAX/REB	3,302	3,338	3,361	3,674	3,720
17	BASELINE	3,246	3,264	3,323	3,571	3,666
18	DIFFERENCE	0,056	0,074	0,038	0,104	0,053
19	% DIFFERENCE	1,72	2,26	1,14	2,91	1,46
20						
21	FULL SIZE MILL AUTOS					
22	WITH TAX/REB	2,194	2,258	2,330	2,503	2,726
23	BASELINE	2,764	2,810	2,919	3,264	3,400
24	DIFFERENCE	-0,570	-0,552	-0,589	-0,761	-0,674
25	% DIFFERENCE	-20,62	-19,66	-20,17	-23,31	-19,83
26						
27	LUXURY MILL AUTOS					
28	WITH TAX/REB	1,135	1,184	1,224	1,350	1,426
29	BASELINE	1,152	1,193	1,245	1,373	1,445
30	DIFFERENCE	-0,017	-0,009	-0,021	-0,023	-0,019
31	% DIFFERENCE	-1,49	-0,79	-1,66	-1,66	-1,32

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX/REBATE POLICY

TABLE 3.05 STOCKS BY SIZE CLASS

LINE	I T E M		1975	1976	1977	1978	1979	1980
1	DESIRED STOCK							
2								
3	SUBCOMPACT	MILL AUTO						
4	WITH TAX/REB		22,300	20,296	20,808	25,930	25,573	25,152
5	BASELINE		22,300	20,296	20,808	21,524	21,381	21,493
6	DIFFERENCE		0,0	0,0	0,0	4,406	4,192	3,658
7	% DIFFERENCE		0,0	0,0	0,0	20,47	19,61	17,02
8								
9	COMPACT	MILL AUTO						
10	WITH TAX/REB		18,233	18,871	18,205	17,654	18,594	20,050
11	BASELINE		18,233	18,871	18,205	18,254	19,179	20,247
12	DIFFERENCE		0,0	0,0	0,0	-0,600	-0,585	-0,197
13	% DIFFERENCE		0,0	0,0	0,0	-3,29	-3,05	-0,97
14								
15	MID-SIZE	MILL AUTO						
16	WITH TAX/REB		25,582	26,207	26,690	28,081	28,505	29,065
17	BASELINE		25,582	26,207	26,690	27,477	27,947	28,544
18	DIFFERENCE		0,0	0,0	0,0	0,604	0,558	0,521
19	% DIFFERENCE		0,0	0,0	0,0	2,20	2,00	1,83
20								
21	FULL SIZE	MILL AUTO						
22	WITH TAX/REB		21,695	25,113	27,014	24,024	24,789	24,331
23	BASELINE		21,695	25,113	27,014	28,100	28,597	27,971
24	DIFFERENCE		0,0	0,0	0,0	-4,077	-3,808	-3,641
25	% DIFFERENCE		0,0	0,0	0,0	-14,51	-13,31	-13,02
26								
27	LUXURY	MILL AUTO						
28	WITH TAX/REB		8,915	9,198	9,389	9,583	9,854	10,123
29	BASELINE		8,915	9,198	9,389	9,656	9,933	10,200
30	DIFFERENCE		0,0	0,0	0,0	-0,073	-0,079	-0,077
31	% DIFFERENCE		0,0	0,0	0,0	-0,76	-0,80	-0,76

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX/REBATE POLICY

TABLE 3.05 STOCKS BY SIZE CLASS

LINE	I T E M		1981	1982	1983	1984	1985
1	DESIRED STOCK						
2							
3	SUBCOMPACT	MILL AUTO					
4	WITH TAX/REB		24,694	25,466	25,183	25,756	25,707
5	BASELINE		21,149	21,283	21,140	21,005	21,028
6	DIFFERENCE		3,545	4,185	4,043	4,751	4,679
7	% DIFFERENCE		16,76	19,66	19,13	22,62	22,25
8							
9	COMPACT	MILL AUTO					
10	WITH TAX/REB		21,735	21,876	22,931	23,526	24,376
11	BASELINE		21,623	22,203	22,896	23,570	24,300
12	DIFFERENCE		0,111	-0,327	0,035	-0,044	0,077
13	% DIFFERENCE		0,51	-1,47	0,15	-0,19	0,32
14							
15	MID-SIZE	MILL AUTO					
16	WITH TAX/REB		29,601	29,974	30,422	31,386	31,981
17	BASELINE		29,115	29,470	29,928	30,615	31,417
18	DIFFERENCE		0,487	0,504	0,494	0,771	0,564
19	% DIFFERENCE		1,67	1,71	1,65	2,52	1,79
20							
21	FULL SIZE	MILL AUTO					
22	WITH TAX/REB		23,356	23,030	23,002	23,003	23,971
23	BASELINE		27,253	27,098	27,331	28,245	29,081
24	DIFFERENCE		-3,898	-4,068	-4,329	-5,242	-5,110
25	% DIFFERENCE		-14,30	-15,01	-15,84	-18,56	-17,57
26							
27	LUXURY	MILL AUTO					
28	WITH TAX/REB		10,358	10,606	10,889	11,288	11,789
29	BASELINE		10,450	10,701	10,992	11,416	11,916
30	DIFFERENCE		-0,092	-0,095	-0,104	-0,129	-0,127
31	% DIFFERENCE		-0,88	-0,89	-0,95	-1,13	-1,06

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX/REBATE POLICY

TABLE 3.06 STOCKS BY SIZE CLASS - CONTINUED

LINE	ITEM		1975	1976	1977	1978	1979	1980
1	YEAR-END ACTUAL STOCKS							
2								
3	SUBCOMPACT	MILL AUTO						
4	WITH TAX/REB		16,296	17,929	19,409	21,665	23,374	24,627
5	BASELINE		16,296	17,929	19,409	20,827	21,867	22,600
6	DIFFERENCE		0,0	0,0	0,0	0,838	1,507	2,027
7	% DIFFERENCE		0,0	0,0	0,0	4,02	6,89	8,97
8								
9	COMPACT	MILL AUTO						
10	WITH TAX/REB		16,965	17,643	18,254	18,698	19,079	19,566
11	BASELINE		16,965	17,643	18,254	18,843	19,361	19,890
12	DIFFERENCE		0,0	0,0	0,0	-0,144	-0,282	-0,324
13	% DIFFERENCE		0,0	0,0	0,0	-0,77	-1,46	-1,63
14								
15	MID-SIZE	MILL AUTO						
16	WITH TAX/REB		22,329	23,542	24,523	25,816	26,800	27,661
17	BASELINE		22,329	23,542	24,523	25,620	26,499	27,280
18	DIFFERENCE		0,0	0,0	0,0	0,197	0,302	0,381
19	% DIFFERENCE		0,0	0,0	0,0	0,77	1,14	1,40
20								
21	FULL SIZE	MILL AUTO						
22	WITH TAX/REB		32,701	31,740	30,776	29,608	28,340	26,949
23	BASELINE		32,701	31,740	30,776	30,249	29,588	28,756
24	DIFFERENCE		0,0	0,0	0,0	-0,641	-1,248	-1,807
25	% DIFFERENCE		0,0	0,0	0,0	-2,12	-4,22	-6,28
26								
27	LUXURY	MILL AUTO						
28	WITH TAX/REB		8,835	8,830	9,144	9,483	9,723	9,918
29	BASELINE		8,835	8,830	9,144	9,473	9,723	9,930
30	DIFFERENCE		0,0	0,0	0,0	0,010	0,000	-0,012
31	% DIFFERENCE		0,0	0,0	0,0	0,11	0,00	-0,12

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX/REBATE POLICY

TABLE 3.06 STOCKS BY SIZE CLASS - CONTINUED

LINE	I T E M		1981	1982	1983	1984	1985
1	YEAR-END ACTUAL STOCKS						
2							
3	SUBCOMPACT	MILL AUTO					
4	WITH TAX/REB		25,821	26,141	26,624	27,218	27,650
5	BASELINE		22,971	23,159	23,219	23,278	23,286
6	DIFFERENCE		2,850	2,982	3,406	3,936	4,364
7	% DIFFERENCE		10,67	12,88	14,67	16,91	18,74
8							
9	COMPACT	MILL AUTO					
10	WITH TAX/REB		20,239	20,863	21,679	22,641	23,711
11	BASELINE		20,548	21,231	22,007	22,975	23,975
12	DIFFERENCE		-0,309	-0,369	-0,327	-0,334	-0,264
13	% DIFFERENCE		-1,51	-1,64	-1,49	-1,37	-1,10
14							
15	MID-SIZE	MILL AUTO					
16	WITH TAX/REB		28,447	29,219	29,957	30,926	31,831
17	BASELINE		28,028	28,731	29,439	30,314	31,188
18	DIFFERENCE		0,419	0,487	0,518	0,612	0,642
19	% DIFFERENCE		1,49	1,70	1,76	2,02	2,06
20							
21	FULL SIZE	MILL AUTO					
22	WITH TAX/REB		25,552	24,436	23,664	23,310	23,580
23	BASELINE		27,924	27,315	27,062	27,358	27,946
24	DIFFERENCE		-2,372	-2,879	-3,397	-4,048	-4,366
25	% DIFFERENCE		-8,49	-10,54	-12,55	-14,80	-16,34
26							
27	LUXURY	MILL AUTO					
28	WITH TAX/REB		10,086	10,275	10,501	10,847	11,253
29	BASELINE		10,120	10,318	10,561	10,925	11,347
30	DIFFERENCE		-0,034	-0,042	-0,060	-0,078	-0,094
31	% DIFFERENCE		-0,34	-0,41	-0,57	-0,72	-0,83

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
MEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX/REBATE POLICY

TABLE 3.07 CAPITALIZED COSTS PER MILE

LINE	I T E M		1975	1976	1977	1978	1979	1980
1	AVG NOMINAL CAP. COST PER MILE	$/MILE						
2	WITH TAX/REB		0.195	0.208	0.222	0.238	0.250	0.265
3	BASELINE		0.195	0.208	0.222	0.238	0.253	0.269
4	DIFFERENCE		0.0	0.0	0.0	-0.004	-0.004	-0.004
5	% DIFFERENCE		0.0	0.0	0.0	-1.60	-1.43	-1.36
6								
7	AVG REAL CAP. COST PER MILE	1972 $						
8	WITH TAX/REB		0.152	0.153	0.154	0.154	0.157	0.159
9	BASELINE		0.152	0.153	0.156	0.157	0.159	0.161
10	DIFFERENCE		0.0	0.0	0.0	-0.003	-0.002	-0.002
11	% DIFFERENCE		0.0	0.0	0.0	-1.60	-1.43	-1.36
12								
13	CAPITALIZED COST PER MILE BY SIZE:							
14								
15	SUBCOMPACTS	$/MILE						
16	WITH TAX/REB		0.152	0.163	0.174	0.182	0.194	0.207
17	BASELINE		0.152	0.163	0.174	0.187	0.199	0.212
18	DIFFERENCE		0.0	0.0	0.0	-0.005	-0.005	-0.005
19	% DIFFERENCE		0.0	0.0	0.0	-2.65	-2.58	-2.42
20								
21	COMPACTS	$/MILE						
22	WITH TAX/REB		0.176	0.186	0.200	0.213	0.226	0.239
23	BASELINE		0.176	0.186	0.200	0.215	0.228	0.242
24	DIFFERENCE		0.0	0.0	0.0	-0.002	-0.002	-0.002
25	% DIFFERENCE		0.0	0.0	0.0	-0.78	-0.78	-0.97
26								
27	MID-SIZE	$/MILE						
28	WITH TAX/REB		0.198	0.208	0.223	0.238	0.254	0.269
29	BASELINE		0.198	0.208	0.223	0.238	0.254	0.269
30	DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0
31	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0
32								
33	FULL SIZE	$/MILE						
34	WITH TAX/REB		0.217	0.228	0.243	0.261	0.277	0.295
35	BASELINE		0.217	0.228	0.243	0.259	0.275	0.293
36	DIFFERENCE		0.0	0.0	0.0	0.002	0.002	0.002
37	% DIFFERENCE		0.0	0.0	0.0	0.74	0.69	0.65
38								
39	LUXURY	$/MILE						
40	WITH TAX/REB		0.281	0.293	0.313	0.336	0.359	0.382
41	BASELINE		0.281	0.293	0.313	0.335	0.357	0.379
42	DIFFERENCE		0.0	0.0	0.0	0.002	0.003	0.003
43	% DIFFERENCE		0.0	0.0	0.0	0.50	0.77	0.73

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX/REBATE POLICY

TABLE 3.07 CAPITALIZED COSTS PER MILE

LINE	I T E M		1981	1982	1983	1984	1985
1	AVG NOMINAL CAP. COST PER MILE	$/MILE					
2	WITH TAX/REB		0.281	0.295	0.311	0.329	0.347
3	BASELINE		0.284	0.299	0.314	0.332	0.350
4	DIFFERENCE		-0.003	-0.004	-0.003	-0.003	-0.002
5	% DIFFERENCE		-1.15	-1.20	-0.96	-0.90	-0.69
6							
7	AVG REAL CAP. COST PER MILE	1972 $					
8	WITH TAX/REB		0.161	0.163	0.165	0.168	0.171
9	BASELINE		0.163	0.165	0.167	0.169	0.172
10	DIFFERENCE		-0.002	-0.002	-0.002	-0.002	-0.001
11	% DIFFERENCE		-1.15	-1.20	-0.96	-0.90	-0.69
12							
13	CAPITALIZED COST PER MILE BY SIZE:						
14							
15	SUBCOMPACTS	$/MILE					
16	WITH TAX/REB		0.220	0.231	0.245	0.259	0.274
17	BASELINE		0.225	0.237	0.250	0.265	0.280
18	DIFFERENCE		-0.005	-0.006	-0.005	-0.006	-0.006
19	% DIFFERENCE		-2.23	-2.36	-2.15	-2.14	-2.08
20							
21	COMPACTS	$/MILE					
22	WITH TAX/REB		0.252	0.266	0.280	0.297	0.313
23	BASELINE		0.254	0.268	0.282	0.298	0.314
24	DIFFERENCE		-0.002	-0.002	-0.002	-0.001	-0.001
25	% DIFFERENCE		-0.91	-0.67	-0.64	-0.36	-0.37
26							
27	MID-SIZE	$/MILE					
28	WITH TAX/REB		0.285	0.300	0.316	0.333	0.352
29	BASELINE		0.284	0.299	0.314	0.330	0.348
30	DIFFERENCE		0.001	0.001	0.002	0.002	0.004
31	% DIFFERENCE		0.32	0.33	0.65	0.67	1.08
32							
33	FULL SIZE	$/MILE					
34	WITH TAX/REB		0.312	0.328	0.345	0.365	0.384
35	BASELINE		0.309	0.325	0.341	0.358	0.377
36	DIFFERENCE		0.003	0.003	0.004	0.006	0.007
37	% DIFFERENCE		0.97	1.00	1.32	1.77	1.80
38							
39	LUXURY	$/MILE					
40	WITH TAX/REB		0.403	0.424	0.445	0.470	0.494
41	BASELINE		0.399	0.419	0.440	0.462	0.486
42	DIFFERENCE		0.004	0.004	0.006	0.008	0.008
43	% DIFFERENCE		0.98	1.03	1.29	1.67	1.70

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX/REBATE POLICY

TABLE 3.08 CAPITALIZED COSTS PER MILE - CONTINUED

LINE	I T E M		1975	1976	1977	1978	1979	1980
1	CAP. COST PER MILE BY FOR/DOM							
2								
3	TOTAL DOMESTIC	$/MIL						
4	WITH TAX/REB		0.196	0.210	0.225	0.239	0.255	0.270
5	BASELINE		0.196	0.210	0.225	0.242	0.258	0.273
6	DIFFERENCE		0.0	0.0	0.0	-0.003	-0.003	-0.003
7	% DIFFERENCE		0.0	0.0	0.0	-1.37	-1.16	-1.11
8								
9	TOTAL FOREIGN	$/MIL						
10	WITH TAX/REB		0.166	0.178	0.190	0.194	0.209	0.225
11	BASELINE		0.166	0.178	0.190	0.203	0.218	0.234
12	DIFFERENCE		0.0	0.0	0.0	-0.009	-0.009	-0.009
13	% DIFFERENCE		0.0	0.0	0.0	-4.64	-4.24	-3.81
14								
15	DOMESTIC SUBCOMPACT	$/MIL						
16	WITH TAX/REB		0.158	0.163	0.176	0.184	0.196	0.208
17	BASELINE		0.158	0.163	0.176	0.188	0.201	0.213
18	DIFFERENCE		0.0	0.0	0.0	-0.004	-0.005	-0.005
19	% DIFFERENCE		0.0	0.0	0.0	-2.28	-2.41	-2.31
20								
21	FOREIGN SUBCOMPACT	$/MIL						
22	WITH TAX/REB		0.151	0.163	0.173	0.179	0.192	0.205
23	BASELINE		0.151	0.163	0.173	0.185	0.198	0.211
24	DIFFERENCE		0.0	0.0	0.0	-0.006	-0.005	-0.005
25	% DIFFERENCE		0.0	0.0	0.0	-2.97	-2.66	-2.54
26								
27	DOMESTIC COMPACT	$/MIL						
28	WITH TAX/REB		0.174	0.185	0.198	0.211	0.224	0.237
29	BASELINE		0.174	0.185	0.198	0.213	0.226	0.239
30	DIFFERENCE		0.0	0.0	0.0	-0.002	-0.002	-0.002
31	% DIFFERENCE		0.0	0.0	0.0	-0.72	-0.69	-0.94
32								
33	FOREIGN COMPACT	$/MIL						
34	WITH TAX/REB		0.199	0.216	0.229	0.241	0.259	0.278
35	BASELINE		0.199	0.216	0.229	0.245	0.263	0.282
36	DIFFERENCE		0.0	0.0	0.0	-0.004	-0.004	-0.004
37	% DIFFERENCE		0.0	0.0	0.0	-1.57	-1.49	-1.41
38								
39	DOMESTIC LUXURY	$/MIL						
40	WITH TAX/REB		0.276	0.287	0.307	0.330	0.353	0.374
41	BASELINE		0.276	0.287	0.307	0.328	0.349	0.371
42	DIFFERENCE		0.0	0.0	0.0	0.002	0.003	0.003
43	% DIFFERENCE		0.0	0.0	0.0	0.59	0.87	0.82
44								
45	FOREIGN LUXURY	$/MIL						
46	WITH TAX/REB		0.318	0.350	0.371	0.397	0.428	0.462
47	BASELINE		0.318	0.350	0.371	0.398	0.428	0.462
48	DIFFERENCE		0.0	0.0	0.0	-0.001	0.0	0.0
49	% DIFFERENCE		0.0	0.0	0.0	-0.20	0.0	0.0

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX/REBATE POLICY

TABLE 3.08 CAPITALIZED COSTS PER MILE - CONTINUED

LINE	I T E M		1981	1982	1983	1984	1985
1	CAP. COST PER MILE BY FOR/DOM						
2							
3	TOTAL DOMESTIC	$/MIL					
4	WITH TAX/REB		0.285	0.300	0.316	0.333	0.353
5	BASELINE		0.287	0.302	0.318	0.335	0.353
6	DIFFERENCE		-0.003	-0.003	-0.002	-0.002	-0.001
7	% DIFFERENCE		-0.92	-0.88	-0.61	-0.50	-0.22
8							
9	TOTAL FOREIGN	$/MIL					
10	WITH TAX/REB		0.243	0.257	0.275	0.291	0.310
11	BASELINE		0.252	0.267	0.284	0.303	0.322
12	DIFFERENCE		-0.009	-0.010	-0.010	-0.012	-0.011
13	% DIFFERENCE		-3.45	-3.86	-3.40	-3.83	-3.56
14							
15	DOMESTIC SUBCOMPACT	$/MIL					
16	WITH TAX/REB		0.220	0.231	0.243	0.258	0.272
17	BASELINE		0.225	0.237	0.249	0.263	0.278
18	DIFFERENCE		-0.005	-0.006	-0.006	-0.006	-0.006
19	% DIFFERENCE		-2.23	-2.36	-2.27	-2.15	-2.23
20							
21	. FOREIGN SUBCOMPACT	$/MIL					
22	WITH TAX/REB		0.219	0.232	0.246	0.260	0.276
23	BASELINE		0.224	0.237	0.251	0.266	0.281
24	DIFFERENCE		-0.005	-0.006	-0.005	-0.006	-0.005
25	% DIFFERENCE		-2.23	-2.36	-2.04	-2.13	-1.95
26							
27	DOMESTIC COMPACT	$/MIL					
28	WITH TAX/REB		0.250	0.264	0.277	0.293	0.310
29	BASELINE		0.252	0.265	0.279	0.294	0.311
30	DIFFERENCE		-0.002	-0.002	-0.002	-0.001	-0.001
31	% DIFFERENCE		-0.89	-0.65	-0.62	-0.33	-0.38
32							
33	FOREIGN COMPACT	$/MIL					
34	WITH TAX/REB		0.297	0.316	0.335	0.356	0.377
35	BASELINE		0.300	0.319	0.338	0.359	0.380
36	DIFFERENCE		-0.003	-0.003	-0.003	-0.003	-0.003
37	% DIFFERENCE		-1.16	-1.01	-0.96	-0.77	-0.79
38							
39	DOMESTIC LUXURY	$/MIL					
40	WITH TAX/REB		0.394	0.413	0.433	0.457	0.479
41	BASELINE		0.390	0.409	0.427	0.449	0.471
42	DIFFERENCE		0.004	0.005	0.006	0.008	0.009
43	% DIFFERENCE		1.08	1.12	1.38	1.78	1.81
44							
45	FOREIGN LUXURY	$/MIL					
46	WITH TAX/REB		0.496	0.530	0.566	0.605	0.643
47	BASELINE		0.495	0.528	0.563	0.600	0.638
48	DIFFERENCE		0.001	0.002	0.003	0.005	0.005
49	% DIFFERENCE		0.18	0.39	0.57	0.81	0.82

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
MEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX/REBATE POLICY

TABLE 3.09 MISCELLANEOUS

LINE	ITEM		1975	1976	1977	1978	1979	1980
1	DESIRED STOCK PER FAMILY	AUTOS						
2	WITH TAX/REB		1,252	1,261	1,278	1,297	1,304	1,306
3	BASELINE		1,252	1,261	1,278	1,295	1,300	1,302
4	DIFFERENCE		0,0	0,0	0,0	0,008	0,004	0,004
5	% DIFFERENCE		0,0	0,0	0,0	0,32	0,28	0,27
6								
7	YEAR-END STOCK PER FAMILY	AUTOS						
8	WITH TAX/REB		1,292	1,299	1,307	1,324	1,326	1,321
9	BASELINE		1,292	1,299	1,307	1,320	1,323	1,318
10	DIFFERENCE		0,0	0,0	0,0	0,003	0,003	0,003
11	% DIFFERENCE		0,0	0,0	0,0	0,25	0,26	0,24
12								
13	VEHICLE MILES PER FAMILY	THOU MILES						
14	WITH TAX/REB		13,727	13,407	13,216	13,093	13,095	13,085
15	BASELINE		13,727	13,407	13,216	13,079	13,080	13,021
16	DIFFERENCE		0,0	0,0	0,0	0,014	0,055	0,063
17	% DIFFERENCE		0,0	0,0	0,0	0,11	0,42	0,49
18								
19	VEHICLE MILES PER AUTO	THOU MILES						
20	WITH TAX/REB		10,778	10,478	10,236	10,042	9,969	9,968
21	BASELINE		10,778	10,478	10,236	10,044	9,952	9,945
22	DIFFERENCE		0,0	0,0	0,0	-0,002	0,017	0,023
23	% DIFFERENCE		0,0	0,0	0,0	-0,02	0,17	0,23
24								
25	RATIO-NEW REGIS, TO BEGIN, STOCK	RATIO						
26	WITH TAX/REB		0,0889	0,1020	0,1099	0,1112	0,1080	0,1104
27	BASELINE		0,0889	0,1020	0,1099	0,1088	0,1081	0,1101
28	DIFFERENCE		0,0	0,0	0,0	0,0024	-0,0001	0,0003
29	% DIFFERENCE		0,0	0,0	0,0	2,18	-0,07	0,26
30								
31	RATIO-SCRAPPAGE TO BEGIN, STOCK	RATIO						
32	WITH TAX/REB		0,0591	0,0718	0,0856	0,0802	0,0886	0,0973
33	BASELINE		0,0591	0,0718	0,0856	0,0804	0,0888	0,0968
34	DIFFERENCE		0,0	0,0	0,0	-0,0002	-0,0002	0,0005
35	% DIFFERENCE		0,0	0,0	0,0	-0,21	-0,23	0,47
36								
37	REAL DISP, INCOME PER FAMILY	THOU 72 $						
38	WITH TAX/REB		9,406	9,481	9,685	9,858	10,040	10,234
39	BASELINE		9,406	9,481	9,685	9,858	10,040	10,234
40	DIFFERENCE		0,0	0,0	0,0	0,0	0,0	0,0
41	% DIFFERENCE		0,0	0,0	0,0	0,0	0,0	0,0
42								
43	FAMILIES WITH INCOME OVER $15,000	%						
44	WITH TAX/REB		22,05	20,94	20,23	20,09	21,08	22,60
45	BASELINE		22,05	20,94	20,23	20,09	21,04	22,60
46	DIFFERENCE		0,0	0,0	0,0	0,0	0,0	0,0
47	% DIFFERENCE		0,0	0,0	0,0	0,0	0,0	0,0

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX/REBATE POLICY

TABLE 3.09 MISCELLANEOUS

LINE	I T E M		1981	1982	1983	1984	1985
1	DESIRED STOCK PER FAMILY	AUTOS					
2	WITH TAX/REB		1.307	1.307	1.305	1.306	1.308
3	BASELINE		1.304	1.304	1.303	1.305	1.306
4	DIFFERENCE		0.003	0.003	0.002	0.002	0.002
5	% DIFFERENCE		0.23	0.28	0.19	0.18	0.16
6							
7	YEAR-END STOCK PER FAMILY	AUTOS					
8	WITH TAX/REB		1.309	1.300	1.295	1.303	1.314
9	BASELINE		1.308	1.298	1.294	1.301	1.313
10	DIFFERENCE		0.002	0.002	0.002	0.001	0.001
11	% DIFFERENCE		0.18	0.18	0.12	0.09	0.07
12							
13	VEHICLE MILES PER FAMILY	THOU MILES					
14	WITH TAX/REB		13.031	12.992	12.988	13.018	13.164
15	BASELINE		12.967	12.931	12.920	12.963	13.118
16	DIFFERENCE		0.065	0.061	0.068	0.055	0.047
17	% DIFFERENCE		0.50	0.47	0.69	0.42	0.35
18							
19	VEHICLE MILES PER AUTO	THOU MILES					
20	WITH TAX/REB		9.998	10.047	10.091	10.108	10.139
21	BASELINE		9.968	10.016	10.056	10.073	10.111
22	DIFFERENCE		0.031	0.031	0.038	0.031	0.028
23	% DIFFERENCE		0.31	0.31	0.38	0.31	0.27
24							
25	RATIO-NEW REGIS. TO BEGIN. STOCK	RATIO					
26	WITH TAX/REB		0.1099	0.1116	0.1128	0.1208	0.1215
27	BASELINE		0.1107	0.1115	0.1133	0.1211	0.1219
28	DIFFERENCE		-0.0007	0.0002	-0.0009	-0.0007	-0.0004
29	% DIFFERENCE		-0.68	0.17	-0.78	-0.57	-0.30
30							
31	RATIO-SCRAPPAGE TO BEGIN. STOCK	RATIO					
32	WITH TAX/REB		0.1005	0.1006	0.0991	0.0979	0.0966
33	BASELINE		0.1002	0.1008	0.0994	0.0983	0.0967
34	DIFFERENCE		0.0003	-0.0002	-0.0003	-0.0004	-0.0001
35	% DIFFERENCE		0.30	-0.21	-0.32	-0.39	-0.13
36							
37	REAL DISP. INCOME PER FAMILY	THOU '72 $					
38	WITH TAX/REB		10.377	10.521	10.688	11.088	11.436
39	BASELINE		10.377	10.521	10.688	11.088	11.436
40	DIFFERENCE		0.0	0.0	0.0	0.0	0.0
41	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0
42							
43	FAMILIES WITH INCOME OVER $15,000	%					
44	WITH TAX/REB		28.22	25.79	27.36	29.36	31.98
45	BASELINE		28.22	25.79	27.36	29.36	31.98
46	DIFFERENCE		0.0	0.0	0.0	0.0	0.0
47	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX/REBATE POLICY

TABLE 3.10 MILES PER GALLON

LINE	I T E M	1975	1976	1977	1978	1979	1980
1							
2	OVERALL FLEET MILES PER GALLON - WEFA						
3	WITH TAX/REB	12.69	12.71	12.82	13.04	13.38	13.80
4	BASELINE	12.69	12.71	12.82	13.03	13.32	13.70
5	DIFFERENCE	0.0	0.0	0.0	0.01	0.06	0.10
6	% DIFFERENCE	0.0	0.0	0.0	0.10	0.47	0.74
7							
8	NEW AUTO MILES PER GALLON (WEFA):						
9	TOTAL						
10	WITH TAX/REB	13.29	13.80	14.44	15.55	16.20	16.92
11	BASELINE	13.29	13.80	14.44	15.12	15.83	16.61
12	DIFFERENCE	0.0	0.0	0.0	0.43	0.37	0.31
13	% DIFFERENCE	0.0	0.0	0.0	2.88	2.34	1.89
14							
15	SUBCOMPACT						
16	WITH TAX/REB	18.74	19.68	20.65	21.32	22.07	23.00
17	BASELINE	18.74	19.68	20.65	21.32	22.07	23.00
18	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
19	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
20							
21	COMPACT						
22	WITH TAX/REB	13.98	14.42	15.10	15.68	16.66	17.75
23	BASELINE	13.98	14.42	15.10	15.68	16.66	17.75
24	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
25	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
26							
27	MID-SIZE						
28	WITH TAX/REB	11.70	12.75	13.39	14.10	14.83	15.62
29	BASELINE	11.70	12.75	13.39	14.10	14.83	15.62
30	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
31	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
32							
33	FULL SIZE						
34	WITH TAX/REB	10.80	11.56	12.42	13.19	13.97	14.58
35	BASELINE	10.80	11.56	12.42	13.19	13.97	14.58
36	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
37	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
38							
39	LUXURY						
40	WITH TAX/REB	10.51	11.64	12.38	12.93	13.83	13.97
41	BASELINE	10.51	11.64	12.38	12.93	13.83	13.97
42	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
43	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX/REBATE POLICY

TABLE 3.10 MILES PER GALLON

LINE	I T E M	1981	1982	1983	1984	1985
1						
2	OVERALL FLEET MILES PER GALLON - WEFA					
3	WITH TAX/REB	14.28	14.88	15.45	16.09	16.78
4	BASELINE	14.15	14.67	15.25	15.86	16.53
5	DIFFERENCE	0.13	0.17	0.20	0.23	0.25
6	% DIFFERENCE	0.95	1.13	1.30	1.43	1.54
7						
8	NEW AUTO MILES PER GALLON (WEFA):					
9	TOTAL					
10	WITH TAX/REB	17.59	18.31	18.99	19.74	20.35
11	BASELINE	17.28	17.97	18.66	19.36	20.01
12	DIFFERENCE	0.31	0.34	0.32	0.38	0.34
13	% DIFFERENCE	1.79	1.89	1.73	1.95	1.70
14						
15	SUBCOMPACT					
16	WITH TAX/REB	23.76	24.57	25.28	26.03	26.68
17	BASELINE	23.76	24.57	25.28	26.03	26.68
18	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
19	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0
20						
21	COMPACT					
22	WITH TAX/REB	18.79	19.55	20.34	21.17	21.88
23	BASELINE	18.79	19.55	20.34	21.17	21.88
24	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
25	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0
26						
27	MID-SIZE					
28	WITH TAX/REB	16.31	16.98	17.67	18.40	19.04
29	BASELINE	16.31	16.98	17.67	18.40	19.04
30	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
31	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0
32						
33	FULL SIZE					
34	WITH TAX/REB	15.07	15.71	16.38	17.11	17.78
35	BASELINE	15.07	15.71	16.38	17.11	17.78
36	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
37	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0
38						
39	LUXURY					
40	WITH TAX/REB	14.42	15.05	15.70	16.38	17.02
41	BASELINE	14.42	15.05	15.70	16.38	17.02
42	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
43	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX/REBATE POLICY

TABLE 3.11 MILES PER GALLON - CONTINUED

LINE	ITEM	1975	1976	1977	1978	1979	1980
1	NEW AUTO M.P.G. BY FOR/DOM (WEFA)						
2							
3	TOTAL DOMESTIC						
4	WITH TAX/REB	12.38	13.04	13.72	14.63	15.38	16.17
5	BASELINE	12.38	13.04	13.72	14.40	15.17	15.98
6	DIFFERENCE	0.0	0.0	0.0	0.23	0.21	0.19
7	% DIFFERENCE	0.0	0.0	0.0	1.62	1.35	1.20
8							
9	TOTAL FOREIGN						
10	WITH TAX/REB	19.82	20.69	21.25	22.22	22.63	23.23
11	BASELINE	19.82	20.69	21.25	22.04	22.47	23.09
12	DIFFERENCE	0.0	0.0	0.0	0.18	0.16	0.18
13	% DIFFERENCE	0.0	0.0	0.0	0.79	0.72	0.62
14							
15	DOMESTIC SUBCOMPACT						
16	WITH TAX/REB	17.13	17.95	18.92	19.81	20.87	22.04
17	BASELINE	17.13	17.95	18.92	19.81	20.87	22.04
18	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
19	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
20							
21	FOREIGN SUBCOMPACT						
22	WITH TAX/REB	20.44	21.33	21.97	22.80	23.25	23.96
23	BASELINE	20.44	21.33	21.97	22.80	23.25	23.96
24	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
25	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
26							
27	DOMESTIC COMPACT						
28	WITH TAX/REB	13.67	14.23	14.88	15.46	16.08	17.58
29	BASELINE	13.67	14.23	14.88	15.46	16.08	17.58
30	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
31	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
32							
33	FOREIGN COMPACT						
34	WITH TAX/REB	18.81	19.06	19.57	20.14	20.57	21.20
35	BASELINE	18.81	19.06	19.57	20.14	20.57	21.20
36	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
37	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
38							
39	DOMESTIC LUXURY						
40	WITH TAX/REB	10.08	11.32	12.07	12.65	13.16	13.70
41	BASELINE	10.08	11.32	12.07	12.65	13.16	13.70
42	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
43	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
44							
45	FOREIGN LUXURY						
46	WITH TAX/REB	15.19	15.64	16.09	16.46	17.00	17.39
47	BASELINE	15.19	15.64	16.09	16.46	17.00	17.39
48	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
49	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX/REBATE POLICY

TABLE 3.11 MILES PER GALLON - CONTINUED

LINE	I T E M	1981	1982	1983	1984	1985
1	NEW AUTO M.P.G. BY FOR/DOM (WEFA)					
2						
3	TOTAL DOMESTIC					
4	WITH TAX/REB	16.90	17.61	18.32	19.07	19.70
5	BASELINE	16.70	17.39	18.10	18.81	19.47
6	DIFFERENCE	0.21	0.22	0.22	0.26	0.23
7	% DIFFERENCE	1.25	1.26	1.22	1.36	1.19
8						
9	TOTAL FOREIGN					
10	WITH TAX/REB	23.68	24.39	24.88	25.57	26.07
11	BASELINE	23.55	24.22	24.72	25.37	25.89
12	DIFFERENCE	0.13	0.17	0.15	0.20	0.18
13	% DIFFERENCE	0.57	0.70	0.62	0.77	0.70
14						
15	DOMESTIC SUBCOMPACT					
16	WITH TAX/REB	23.07	23.94	24.85	25.59	26.36
17	BASELINE	23.07	23.94	24.85	25.59	26.36
18	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
19	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0
20						
21	FOREIGN SUBCOMPACT					
22	WITH TAX/REB	24.46	25.20	25.72	26.46	26.99
23	BASELINE	24.46	25.20	25.72	26.46	26.99
24	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
25	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0
26						
27	DOMESTIC COMPACT					
28	WITH TAX/REB	18.65	19.42	20.22	21.04	21.76
29	BASELINE	18.65	19.42	20.22	21.04	21.76
30	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
31	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0
32						
33	FOREIGN COMPACT					
34	WITH TAX/REB	21.83	22.48	23.15	23.83	24.53
35	BASELINE	21.83	22.48	23.15	23.83	24.53
36	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
37	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0
38						
39	DOMESTIC LUXURY					
40	WITH TAX/REB	14.15	14.79	15.45	16.15	16.80
41	BASELINE	14.15	14.79	15.45	16.15	16.80
42	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
43	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0
44						
45	FOREIGN LUXURY					
46	WITH TAX/REB	17.88	18.28	18.76	19.11	19.60
47	BASELINE	17.88	18.28	18.76	19.11	19.60
48	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
49	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX/REBATE POLICY

TABLE 3.12 DOMESTIC AND FOREIGN AUTO PRICES

LINE	ITEM		1975	1976	1977	1978	1979	1980
1	TOTAL DOMESTIC AUTO PRICES:							
2								
3	SUBCOMPACT	DOLLARS						
4	WITH TAX/REB		3747.	3933.	4259.	4291.	4533.	4791.
5	BASELINE		3747.	3933.	4259.	4558.	4828.	5090.
6	DIFFERENCE		0.	0.	0.	-263.	-295.	-299.
7	% DIFFERENCE		0.0	0.0	0.0	-5.78	-6.10	-5.88
8								
9	COMPACT	DOLLARS						
10	WITH TAX/REB		4284.	4485.	4840.	5068.	5383.	5652.
11	BASELINE		4284.	4485.	4840.	5161.	5677.	5789.
12	DIFFERENCE		0.	0.	0.	-93.	-98.	-136.
13	% DIFFERENCE		0.0	0.0	0.0	-1.81	-1.72	-2.36
14								
15	MID-SIZE	DOLLARS						
16	WITH TAX/REB		5171.	5416.	5840.	6225.	6599.	6970.
17	BASELINE		5171.	5416.	5840.	6225.	6599.	6970.
18	DIFFERENCE		0.	0.	0.	0.	0.	0.
19	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0
20								
21	FULL SIZE	DOLLARS						
22	WITH TAX/REB		5867.	6143.	6620.	7175.	7593.	8008.
23	BASELINE		5867.	6143.	6620.	7057.	7477.	7891.
24	DIFFERENCE		0.	0.	0.	117.	116.	117.
25	% DIFFERENCE		0.0	0.0	0.0	1.66	1.56	1.48
26								
27	LUXURY	DOLLARS						
28	WITH TAX/REB		9023.	9403.	10174.	10953.	11654.	12261.
29	BASELINE		9023.	9403.	10174.	10836.	11469.	12076.
30	DIFFERENCE		0.	0.	0.	117.	185.	185.
31	% DIFFERENCE		0.0	0.0	0.0	1.08	1.61	1.53
32								
33	TOTAL FOREIGN AUTO PRICES:							
34								
35	SUBCOMPACT	DOLLARS						
36	WITH TAX/REB		3907.	4222.	4402.	4292.	4589.	4810.
37	BASELINE		3907.	4222.	4402.	4629.	4869.	5135.
38	DIFFERENCE		0.	0.	0.	-336.	-320.	-325.
39	% DIFFERENCE		0.0	0.0	0.0	-7.27	-6.57	-6.38
40								
41	COMPACT	DOLLARS						
42	WITH TAX/REB		6435.	7052.	7385.	7585.	8075.	8634.
43	BASELINE		6435.	7052.	7385.	7820.	8313.	8875.
44	DIFFERENCE		0.	0.	0.	-235.	-238.	-241.
45	% DIFFERENCE		0.0	0.0	0.0	-3.00	-2.86	-2.72
46								
47	LUXURY	DOLLARS						
48	WITH TAX/REB		12692.	14143.	14911.	15886.	17093.	18416.
49	BASELINE		12692.	14143.	14911.	15936.	17093.	18816.
50	DIFFERENCE		0.	0.	0.	-49.	0.	0.
51	% DIFFERENCE		0.0	0.0	0.0	-0.31	0.0	0.0

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX/REBATE POLICY

TABLE 3,12 DOMESTIC AND FOREIGN AUTO PRICES

LINE	ITEM		1981	1982	1983	1984	1985
1	TOTAL DOMESTIC AUTO PRICES						
2							
3	SUBCOMPACT	DOLLARS					
4	WITH TAX/REB		4996,	5186,	5396,	5648,	5862,
5	BASELINE		5302,	5529,	5744,	5991,	6244,
6	DIFFERENCE		-306,	-343,	-348,	-348,	-382,
7	% DIFFERENCE		-5,77	-6,20	-6,07	-5,80	-6,11
8							
9	COMPACT	DOLLARS					
10	WITH TAX/REB		5908,	6212,	6473,	6818,	7121,
11	BASELINE		6046,	6318,	6579,	6878,	7186,
12	DIFFERENCE		-138,	-106,	-106,	-60,	-65,
13	% DIFFERENCE		-2,28	-1,68	-1,62	-0,87	-0,91
14							
15	MID-SIZE	DOLLARS					
16	WITH TAX/REB		7327,	7653,	8020,	8370,	8807,
17	BASELINE		7273,	7593,	7895,	8234,	8576,
18	DIFFERENCE		55,	60,	125,	136,	231,
19	% DIFFERENCE		0,75	0,79	1,59	1,65	2,69
20							
21	FULL SIZE	DOLLARS					
22	WITH TAX/REB		8410,	8781,	9189,	9676,	10078,
23	BASELINE		8227,	8582,	8913,	9286,	9659,
24	DIFFERENCE		183,	199,	276,	391,	419,
25	% DIFFERENCE		2,22	2,32	3,09	4,21	4,33
26							
27	LUXURY	DOLLARS					
28	WITH TAX/REB		12820,	13361,	13926,	14606,	15198,
29	BASELINE		12563,	13082,	13563,	14114,	14672,
30	DIFFERENCE		257,	280,	363,	492,	526,
31	% DIFFERENCE		2,05	2,14	2,68	3,49	3,59
32							
33	TOTAL FOREIGN AUTO PRICES						
34							
35	SUBCOMPACT	DOLLARS					
36	WITH TAX/REB		5103,	5301,	5649,	5898,	6195,
37	BASELINE		5409,	5684,	5964,	6246,	6532,
38	DIFFERENCE		-306,	-383,	-315,	-308,	-337,
39	% DIFFERENCE		-5,65	-6,03	-5,28	-5,57	-5,17
40							
41	COMPACT	DOLLARS					
42	WITH TAX/REB		9248,	9857,	10461,	11103,	11716,
43	BASELINE		9461,	10058,	10660,	11273,	11902,
44	DIFFERENCE		-212,	-197,	-199,	-170,	-186,
45	% DIFFERENCE		-2,24	-1,96	-1,87	-1,50	-1,56
46							
47	LUXURY	DOLLARS					
48	WITH TAX/REB		19866,	21367,	22900,	24483,	26026,
49	BASELINE		19812,	21281,	22702,	24185,	25706,
50	DIFFERENCE		55,	126,	198,	298,	321,
51	% DIFFERENCE		0,28	0,59	0,87	1,23	1,25

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX/REBATE POLICY

TABLE 3.13 USED CAR MARKET

LINE	I T E M		1975	1976	1977	1978	1979	1980
1	AVERAGE WHOLESALE PRICE	DOLLARS						
2	WITH TAX/REB		2008.71	2158.37	2282.85	2359.01	2568.73	2736.68
3	BASELINE		2008.71	2158.37	2282.85	2416.73	2602.18	2779.61
4	DIFFERENCE		0.0	0.0	0.0	-57.72	-33.45	-42.93
5	% DIFFERENCE		0.0	0.0	0.0	-2.39	-1.29	-1.54
6								
7								
8	PRICE OF 1 YR OLD CAR/NEW CAR							
9								
10	SUBCOMPACT	RATIO						
11	WITH TAX/REB		0.873	0.860	0.798	0.783	0.801	0.805
12	BASELINE		0.873	0.860	0.798	0.787	0.804	0.804
13	DIFFERENCE		0.0	0.0	0.0	-0.004	-0.004	0.001
14	% DIFFERENCE		0.0	0.0	0.0	-0.55	-0.45	0.09
15								
16	COMPACT	RATIO						
17	WITH TAX/REB		0.824	0.739	0.731	0.685	0.725	0.728
18	BASELINE		0.824	0.739	0.731	0.710	0.725	0.728
19	DIFFERENCE		0.0	0.0	0.0	-0.025	0.000	0.000
20	% DIFFERENCE		0.0	0.0	0.0	-3.54	0.04	0.02
21								
22	MID-SIZE	RATIO						
23	WITH TAX/REB		0.636	0.708	0.635	0.645	0.646	0.651
24	BASELINE		0.636	0.708	0.635	0.642	0.648	0.651
25	DIFFERENCE		0.0	0.0	0.0	0.004	-0.002	-0.001
26	% DIFFERENCE		0.0	0.0	0.0	0.58	-0.30	-0.10
27								
28	FULL SIZE	RATIO						
29	WITH TAX/REB		0.686	0.695	0.591	0.569	0.610	0.617
30	BASELINE		0.686	0.695	0.591	0.588	0.613	0.616
31	DIFFERENCE		0.0	0.0	0.0	-0.019	-0.004	0.001
32	% DIFFERENCE		0.0	0.0	0.0	-3.19	-0.58	0.24
33								
34	LUXURY	RATIO						
35	WITH TAX/REB		0.715	0.743	0.689	0.680	0.695	0.701
36	BASELINE		0.715	0.743	0.689	0.687	0.700	0.700
37	DIFFERENCE		0.0	0.0	0.0	-0.007	-0.005	0.001
38	% DIFFERENCE		0.0	0.0	0.0	-0.97	-0.65	0.11
39								
40								
41	TOTAL USED CARS PURCHASED	MILL AUTOS						
42	WITH TAX/REB		16.98	18.66	15.78	15.48	16.57	17.53
43	BASELINE		16.98	18.66	15.78	15.39	16.77	17.39
44	DIFFERENCE		0.0	0.0	0.0	0.09	-0.21	0.14
45	% DIFFERENCE		0.0	0.0	0.0	0.58	-1.28	0.81

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
MEPA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX/REBATE POLICY

TABLE 3.13 USED CAR MARKET

LINE	I T E M		1981	1982	1983	1984	1985
1	AVERAGE WHOLESALE PRICE	DOLLARS					
2	WITH TAX/REB		2893.90	3040.20	3185.79	3335.60	3497.63
3	BASELINE		2933.67	3076.41	3214.23	3343.24	3496.23
4	DIFFERENCE		-39.77	-36.21	-28.45	-7.65	1.40
5	% DIFFERENCE		-1.36	-1.18	-0.88	-0.23	0.04
6							
7							
8	PRICE OF 1 YR OLD CAR/NEW CAR						
9							
10	SUBCOMPACT	RATIO					
11	WITH TAX/REB		0.800	0.799	0.798	0.784	0.771
12	BASELINE		0.798	0.798	0.797	0.782	0.769
13	DIFFERENCE		0.002	0.001	0.001	0.002	0.001
14	% DIFFERENCE		0.25	0.14	0.14	0.31	0.18
15							
16	COMPACT	RATIO					
17	WITH TAX/REB		0.716	0.711	0.709	0.702	0.687
18	BASELINE		0.712	0.708	0.705	0.695	0.686
19	DIFFERENCE		0.005	0.003	0.004	0.006	0.001
20	% DIFFERENCE		0.65	0.35	0.51	0.93	0.19
21							
22	MID-SIZE	RATIO					
23	WITH TAX/REB		0.651	0.651	0.650	0.650	0.640
24	BASELINE		0.653	0.651	0.652	0.647	0.645
25	DIFFERENCE		-0.002	-0.000	-0.002	0.002	-0.005
26	% DIFFERENCE		-0.30	-0.01	-0.32	0.38	-0.71
27							
28	FULL SIZE	RATIO					
29	WITH TAX/REB		0.616	0.619	0.615	0.595	0.588
30	BASELINE		0.619	0.618	0.620	0.601	0.588
31	DIFFERENCE		-0.004	0.001	-0.005	-0.006	0.001
32	% DIFFERENCE		-0.57	0.09	-0.77	-1.02	0.09
33							
34	LUXURY	RATIO					
35	WITH TAX/REB		0.701	0.701	0.701	0.690	0.685
36	BASELINE		0.701	0.701	0.702	0.692	0.685
37	DIFFERENCE		-0.001	0.000	-0.001	-0.002	0.000
38	% DIFFERENCE		-0.11	0.03	-0.20	-0.25	0.07
39							
40							
41	TOTAL USED CARS PURCHASED	MILL AUTOS					
42	WITH TAX/REB		17.39	17.75	17.96	18.54	18.23
43	BASELINE		17.33	17.62	17.99	18.46	18.18
44	DIFFERENCE		0.06	0.13	-0.03	0.08	0.05
45	% DIFFERENCE		0.34	0.73	-0.17	0.42	0.27

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
MEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX/REBATE POLICY

TABLE 3,18 UNADJUSTED SHARES BY SIZE CLASS

LINE	I T E M	1975	1976	1977	1978	1979	1980
1	DESIRED SHARES IN STOCK						
2	BEFORE RECONCILING SUM TO 1,0						
3							
4	SUBCOMPACT & COMPACT						
5	WITH TAX/REB	0,4210	0,4022	0,3940	0,4095	0,4105	0,4158
6	BASELINE	0,4210	0,4022	0,3940	0,3921	0,3937	0,3975
7	DIFFERENCE	0,0	0,0	0,0	0,0174	0,0168	0,0159
8	% DIFFERENCE	0,0	0,0	0,0	4,42	4,28	3,99
9							
10	MID-SIZE						
11	WITH TAX/REB	0,2657	0,2691	0,2696	0,2638	0,2649	0,2658
12	BASELINE	0,2657	0,2691	0,2696	0,2709	0,2712	0,2719
13	DIFFERENCE	0,0	0,0	0,0	-0,0070	-0,0063	-0,0060
14	% DIFFERENCE	0,0	0,0	0,0	-2,60	-2,33	-2,22
15							
16	FULL SIZE						
17	WITH TAX/REB	0,2253	0,2579	0,2728	0,2257	0,2304	0,2225
18	BASELINE	0,2253	0,2579	0,2728	0,2770	0,2775	0,2668
19	DIFFERENCE	0,0	0,0	0,0	-0,0513	-0,0472	-0,0419
20	% DIFFERENCE	0,0	0,0	0,0	-18,52	-16,99	-15,67
21							
22	LUXURY						
23	WITH TAX/REB	0,0922	0,0923	0,0920	0,0910	0,0918	0,0931
24	BASELINE	0,0922	0,0923	0,0920	0,0920	0,0928	0,0941
25	DIFFERENCE	0,0	0,0	0,0	-0,0009	-0,0010	-0,0009
26	% DIFFERENCE	0,0	0,0	0,0	-1,00	-1,05	-1,00
27							
28	TOTAL						
29	WITH TAX/REB	1,0081	1,0216	1,0283	0,9900	0,9976	0,9949
30	BASELINE	1,0081	1,0216	1,0283	1,0319	1,0352	1,0298
31	DIFFERENCE	0,0	0,0	0,0	-0,0419	-0,0376	-0,0350
32	% DIFFERENCE	0,0	0,0	0,0	-4,06	-3,63	-3,40

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX/REBATE POLICY

TABLE 3.18 UNADJUSTED SHARES BY SIZE CLASS

LINE	I T E M	1981	1982	1983	1984	1985
1	DESIRED SHARES IN STOCK					
2	BEFORE RECONCILING SUM TO 1.0					
3						
4	SUBCOMPACT & COMPACT					
5	WITH TAX/REB	0.4180	0.4210	0.4222	0.4205	0.4187
6	BASELINE	0.4009	0.4032	0.4031	0.3997	0.3966
7	DIFFERENCE	0.0170	0.0178	0.0191	0.0207	0.0220
8	% DIFFERENCE	4.25	4.42	4.75	5.19	5.55
9						
10	MID-SIZE					
11	WITH TAX/REB	0.2665	0.2665	0.2670	0.2678	0.2673
12	BASELINE	0.2729	0.2732	0.2739	0.2745	0.2749
13	DIFFERENCE	-0.0064	-0.0067	-0.0070	-0.0068	-0.0076
14	% DIFFERENCE	-2.36	-2.45	-2.58	-2.48	-2.75
15						
16	FULL SIZE					
17	WITH TAX/REB	0.2103	0.2048	0.2018	0.1963	0.2004
18	BASELINE	0.2555	0.2512	0.2502	0.2533	0.2545
19	DIFFERENCE	-0.0452	-0.0465	-0.0483	-0.0570	-0.0541
20	% DIFFERENCE	-17.70	-18.49	-19.31	-22.52	-21.25
21						
22	LUXURY					
23	WITH TAX/REB	0.0988	0.0956	0.0969	0.0982	0.1001
24	BASELINE	0.0958	0.0966	0.0979	0.0994	0.1012
25	DIFFERENCE	-0.0010	-0.0010	-0.0010	-0.0012	-0.0011
26	% DIFFERENCE	-1.02	-1.06	-1.07	-1.22	-1.13
27						
28	TOTAL					
29	WITH TAX/REB	0.9891	0.9879	0.9879	0.9827	0.9865
30	BASELINE	1.0246	1.0243	1.0251	1.0270	1.0272
31	DIFFERENCE	-0.0356	-0.0364	-0.0372	-0.0443	-0.0408
32	% DIFFERENCE	-3.47	-3.55	-3.63	-4.31	-3.97

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX/REBATE POLICY

TABLE 3.15 UNADJUSTED SHARES BY SIZE CLASS - CONTINUED

LINE	I T E M	1975	1976	1977	1978	1979	1980
1	DESIRED SHARES IN NEW REGISTRATIONS						
2	BEFORE RECONCILING SUM TO 1.0						
3							
4	SUBCOMPACT & COMPACT						
5	WITH TAX/REB	0.5093	0.4172	0.4122	0.4041	0.4003	0.4055
6	BASELINE	0.5093	0.4172	0.4122	0.4028	0.3995	0.4054
7	DIFFERENCE	0.0	0.0	0.0	0.0013	0.0009	0.0001
8	% DIFFERENCE	0.0	0.0	0.0	12.73	11.23	9.90
9							
10	MID-SIZE						
11	WITH TAX/REB	0.2281	0.3008	0.2852	0.2910	0.2829	0.2811
12	BASELINE	0.2281	0.3008	0.2852	0.2810	0.2754	0.2753
13	DIFFERENCE	0.0	0.0	0.0	0.0100	0.0075	0.0058
14	% DIFFERENCE	0.0	0.0	0.0	3.56	2.72	2.10
15							
16	FULL SIZE						
17	WITH TAX/REB	0.1686	0.1863	0.2252	0.1776	0.1946	0.1902
18	BASELINE	0.1686	0.1863	0.2252	0.2417	0.2511	0.2433
19	DIFFERENCE	0.0	0.0	0.0	-0.0641	-0.0566	-0.0491
20	% DIFFERENCE	0.0	0.0	0.0	-26.53	-22.47	-20.16
21							
22	LUXURY						
23	WITH TAX/REB	0.0941	0.0958	0.0980	0.0918	0.0928	0.0947
24	BASELINE	0.0941	0.0958	0.0980	0.0934	0.0944	0.0961
25	DIFFERENCE	0.0	0.0	0.0	-0.0016	-0.0016	-0.0015
26	% DIFFERENCE	0.0	0.0	0.0	-1.71	-1.69	-1.51
27							
28	TOTAL						
29	WITH TAX/REB	1.0001	1.0001	1.0166	1.0188	1.0186	1.0155
30	BASELINE	1.0001	1.0001	1.0166	1.0188	1.0203	1.0201
31	DIFFERENCE	0.0	0.0	0.0	-0.0044	-0.0057	-0.0046
32	% DIFFERENCE	0.0	0.0	0.0	-0.44	-0.55	-0.45

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX/REBATE POLICY

TABLE 3.15 UNADJUSTED SHARES BY SIZE CLASS - CONTINUED

LINE	I T E M	1981	1982	1983	1984	1985
1	DESIRED SHARES IN NEW REGISTRATIONS					
2	BEFORE RECONCILING SUM TO 1.0					
3						
4	SUBCOMPACT & COMPACT					
5	WITH TAX/REB	0.4520	0.4539	0.4530	0.4521	0.4456
6	BASELINE	0.4111	0.4130	0.4113	0.4051	0.4010
7	DIFFERENCE	0.0409	0.0409	0.0417	0.0470	0.0446
8	% DIFFERENCE	9.95	9.91	10.13	11.60	11.13
9						
10	MID-SIZE					
11	WITH TAX/REB	0.2807	0.2768	0.2742	0.2764	0.2717
12	BASELINE	0.2758	0.2725	0.2703	0.2683	0.2678
13	DIFFERENCE	0.0049	0.0043	0.0039	0.0081	0.0039
14	% DIFFERENCE	1.76	1.59	1.44	3.02	1.46
15						
16	FULL SIZE					
17	WITH TAX/REB	0.1865	0.1872	0.1901	0.1883	0.1991
18	BASELINE	0.2348	0.2346	0.2374	0.2453	0.2483
19	DIFFERENCE	-0.0488	-0.0474	-0.0473	-0.0570	-0.0492
20	% DIFFERENCE	-20.59	-20.19	-19.94	-23.23	-19.83
21						
22	LUXURY					
23	WITH TAX/REB	0.0965	0.0982	0.0999	0.1016	0.1041
24	BASELINE	0.0979	0.0996	0.1012	0.1032	0.1055
25	DIFFERENCE	-0.0014	-0.0014	-0.0014	-0.0016	-0.0014
26	% DIFFERENCE	-1.45	-1.45	-1.37	-1.55	-1.32
27						
28	TOTAL					
29	WITH TAX/REB	1.0157	1.0160	1.0171	1.0184	1.0205
30	BASELINE	1.0197	1.0196	1.0203	1.0219	1.0226
31	DIFFERENCE	-0.0040	-0.0036	-0.0031	-0.0034	-0.0021
32	% DIFFERENCE	-0.39	-0.35	-0.31	-0.34	-0.21

APPENDIX F

THE WHARTON EFA AUTOMOBILE DEMAND MODEL
BASE CASE VS. FIT PROPOSAL

93-183 O - 77 - 18

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
MEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 3,00 SUMMARY

LINE	I T E M		1975	1976	1977	1978	1979	1980
1	DESIRED STOCK OF AUTOS	MILL AUTOS						
2	WITH TAX ONLY		93,783	96,770	99,853	102,845	105,189	107,173
3	BASELINE		93,783	96,770	99,853	102,845	105,199	107,181
4	DIFFERENCE		0,0	0,0	0,0	0,001	-0,009	-0,008
5	% DIFFERENCE		0,0	0,0	0,0	0,00	-0,01	-0,01
6								
7	ACTUAL YR-END STOCK OF AUTOS	MILL AUTOS						
8	WITH TAX ONLY		96,73	99,69	102,11	104,95	106,99	108,43
9	BASELINE		96,73	99,69	102,11	105,01	107,04	108,46
10	DIFFERENCE		0,0	0,0	0,0	-0,07	-0,05	-0,03
11	% DIFFERENCE		0,0	0,0	0,0	-0,06	-0,05	-0,02
12								
13	NEW REGISTRATIONS OF AUTOS	MILL AUTOS						
14	WITH TAX ONLY		8,350	9,868	10,953	11,028	11,356	11,800
15	BASELINE		8,350	9,868	10,953	11,112	11,349	11,785
16	DIFFERENCE		0,0	0,0	0,0	-0,084	0,006	0,015
17	% DIFFERENCE		0,0	0,0	0,0	-0,75	0,06	0,13
18								
19	FOREIGN NEW REGIS,	MILL AUTOS						
20	WITH TAX ONLY		1,517	1,463	1,540	1,568	1,488	1,486
21	BASELINE		1,517	1,463	1,540	1,532	1,487	1,449
22	DIFFERENCE		0,0	0,0	0,0	0,036	0,001	0,037
23	% DIFFERENCE		0,0	0,0	0,0	2,38	2,84	2,58
24								
25	DOMESTIC NEW REGIS,	MILL AUTOS						
26	WITH TAX ONLY		6,833	8,405	9,413	9,460	9,867	10,314
27	BASELINE		6,833	8,405	9,413	9,580	9,902	10,336
28	DIFFERENCE		0,0	0,0	0,0	-0,120	-0,035	-0,022
29	% DIFFERENCE		0,0	0,0	0,0	-1,25	-0,35	-0,22
30								
31	VEHICLE MILES TRAVELED	BILL MILES						
32	WITH TAX ONLY		1027,8	1029,0	1032,8	1040,0	1054,4	1071,0
33	BASELINE		1027,8	1029,0	1032,8	1040,2	1055,2	1071,5
34	DIFFERENCE		0,0	0,0	0,0	-0,2	-0,8	-0,5
35	% DIFFERENCE		0,0	0,0	0,0	-0,02	-0,08	-0,05
36								
37	SCRAPPAGE OF AUTOS	MILL AUTOS						
38	WITH TAX ONLY		5,548	6,909	8,531	8,190	9,313	10,357
39	BASELINE		5,548	6,909	8,531	8,208	9,324	10,365
40	DIFFERENCE		0,0	0,0	0,0	-0,018	-0,011	-0,008
41	% DIFFERENCE		0,0	0,0	0,0	-0,22	-0,12	-0,07
42								
43	NEW DOMESTIC EPA TEST M,P,G,							
44	WITH TAX ONLY		16,14	16,95	17,81	18,77	19,76	20,80
45	BASELINE		16,14	16,95	17,81	18,68	19,68	20,72
46	DIFFERENCE		0,0	0,0	0,0	0,08	0,07	0,07
47	% DIFFERENCE		0,0	0,0	0,0	0,44	0,37	0,36

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 3.00 SUMMARY

LINE	ITEM		1981	1982	1983	1984	1985
1	DESIRED STOCK OF AUTOS	MILL AUTOS					
2	WITH TAX ONLY		109,278	111,226	113,042	114,962	116,963
3	BASELINE		109,305	111,256	113,096	115,021	117,056
4	DIFFERENCE		-0,027	-0,030	-0,053	-0,058	-0,093
5	% DIFFERENCE		-0,02	-0,03	-0,05	-0,05	-0,08
6							
7	ACTUAL YR-END STOCK OF AUTOS	MILL AUTOS					
8	WITH TAX ONLY		109,50	110,67	112,15	114,69	117,55
9	BASELINE		109,59	110,76	112,29	114,85	117,76
10	DIFFERENCE		-0,09	-0,08	-0,14	-0,17	-0,20
11	% DIFFERENCE		-0,08	-0,08	-0,13	-0,14	-0,17
12							
13	NEW REGISTRATIONS OF AUTOS	MILL AUTOS					
14	WITH TAX ONLY		11,922	12,226	12,469	13,566	13,959
15	BASELINE		12,001	12,218	12,544	13,599	14,000
16	DIFFERENCE		-0,079	0,012	-0,075	-0,052	-0,041
17	% DIFFERENCE		-0,66	0,10	-0,60	-0,39	-0,29
18							
19	FOREIGN NEW REGIS,	MILL AUTOS					
20	WITH TAX ONLY		1,426	1,459	1,477	1,587	1,608
21	BASELINE		1,384	1,407	1,417	1,495	1,515
22	DIFFERENCE		0,042	0,052	0,060	0,092	0,093
23	% DIFFERENCE		3,01	3,72	4,23	6,19	6,12
24							
25	DOMESTIC NEW REGIS,	MILL AUTOS					
26	WITH TAX ONLY		10,496	10,767	10,993	11,959	12,351
27	BASELINE		10,617	10,807	11,127	12,104	12,485
28	DIFFERENCE		-0,121	-0,040	-0,135	-0,145	-0,134
29	% DIFFERENCE		-1,14	-0,37	-1,21	-1,20	-1,07
30							
31	VEHICLE MILES TRAVELED	BILL MILES					
32	WITH TAX ONLY		1086,4	1102,6	1120,7	1142,7	1174,5
33	BASELINE		1086,7	1103,5	1121,5	1143,9	1175,9
34	DIFFERENCE		-0,3	-0,9	-0,8	-1,2	-1,4
35	% DIFFERENCE		-0,03	-0,08	-0,07	-0,11	-0,12
36							
37	SCRAPPAGE OF AUTOS	MILL AUTOS					
38	WITH TAX ONLY		10,850	11,050	10,998	11,008	11,098
39	BASELINE		10,867	11,050	11,012	11,035	11,109
40	DIFFERENCE		-0,017	0,009	-0,018	-0,028	-0,011
41	% DIFFERENCE		-0,16	0,08	-0,16	-0,25	-0,10
42							
43	NEW DOMESTIC EPA TEST M,P,G,						
44	WITH TAX ONLY		21,70	22,60	23,65	24,66	25,50
45	BASELINE		21,67	22,57	23,50	24,44	25,31
46	DIFFERENCE		0,11	0,11	0,15	0,21	0,191
47	% DIFFERENCE		0,53	0,51	0,64	0,87	0,771

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
MEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 3.00 SUMMARY - CONTINUED

LINE	I T E M	1975	1976	1977	1978	1979	1980
1	NEW AUTOS FLEET M.P.G. (EPA)						
2	WITH TAX ONLY	17.17	17.82	18.64	19.62	20.53	21.53
3	BASELINE	17.17	17.82	18.64	19.51	20.43	21.44
4	DIFFERENCE	0.0	0.0	0.0	0.11	0.09	0.09
5	% DIFFERENCE	0.0	0.0	0.0	0.55	0.45	0.40
6							
7	NEW DOMESTIC AUTOS M.P.G.						
8	WITH TAX ONLY	16.14	16.95	17.81	18.77	19.76	20.80
9	BASELINE	16.14	16.95	17.81	18.68	19.68	20.72
10	DIFFERENCE	0.0	0.0	0.0	0.08	0.07	0.07
11	% DIFFERENCE	0.0	0.0	0.0	0.44	0.37	0.34
12							
13	NEW FOREIGN AUTOS M.P.G.						
14	WITH TAX ONLY	24.12	25.24	26.01	27.08	27.68	28.50
15	BASELINE	24.12	25.24	26.01	27.05	27.66	28.48
16	DIFFERENCE	0.0	0.0	0.0	0.02	0.02	0.02
17	% DIFFERENCE	0.0	0.0	0.0	0.09	0.08	0.08
18							
19							
20	SHARE OF NEW REGISTRATIONS						
21							
22	SUBCOMPACT						
23	WITH TAX ONLY	0.291	0.238	0.223	0.227	0.212	0.204
24	BASELINE	0.291	0.238	0.223	0.220	0.206	0.199
25	DIFFERENCE	0.0	0.0	0.0	0.007	0.006	0.005
26	% DIFFERENCE	0.0	0.0	0.0	3.39	3.01	2.66
27							
28	COMPACT						
29	WITH TAX ONLY	0.219	0.179	0.183	0.182	0.192	0.204
30	BASELINE	0.219	0.179	0.183	0.176	0.186	0.198
31	DIFFERENCE	0.0	0.0	0.0	0.006	0.006	0.005
32	% DIFFERENCE	0.0	0.0	0.0	3.38	3.02	2.66
33							
34	MID-SIZE						
35	WITH TAX ONLY	0.228	0.301	0.281	0.284	0.277	0.275
36	BASELINE	0.228	0.301	0.281	0.276	0.270	0.270
37	DIFFERENCE	0.0	0.0	0.0	0.009	0.007	0.005
38	% DIFFERENCE	0.0	0.0	0.0	3.09	2.46	2.01
39							
40	FULL-SIZE						
41	WITH TAX ONLY	0.169	0.186	0.222	0.216	0.228	0.223
42	BASELINE	0.169	0.186	0.222	0.237	0.246	0.239
43	DIFFERENCE	0.0	0.0	0.0	-0.022	-0.018	-0.016
44	% DIFFERENCE	0.0	0.0	0.0	-9.11	-7.33	-6.55
45							
46	LUXURY						
47	WITH TAX ONLY	0.094	0.096	0.092	0.091	0.092	0.098
48	BASELINE	0.094	0.096	0.092	0.092	0.093	0.098
49	DIFFERENCE	0.0	0.0	0.0	-0.000	-0.000	-0.000
50	% DIFFERENCE	0.0	0.0	0.0	-0.31	-0.42	-0.38

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 3.00 SUMMARY - CONTINUED

LINE	ITEM	1981	1982	1983	1984	1985
1	NEW AUTOS FLEET M,P,G, (EPA)					
2	WITH TAX ONLY	22.86	23.37	24.31	25.31	26.14
3	BASELINE	22.33	23.24	24.18	25.06	25.91
4	DIFFERENCE	0.13	0.13	0.18	0.25	0.23
5	% DIFFERENCE	0.60	0.58	0.73	0.98	0.87
6						
7	NEW DOMESTIC AUTOS M,P,G,					
8	WITH TAX ONLY	21.79	22.69	23.65	24.66	25.50
9	BASELINE	21.67	22.57	23.50	24.44	25.31
10	DIFFERENCE	0.11	0.11	0.15	0.21	0.19
11	% DIFFERENCE	0.53	0.51	0.64	0.87	0.77
12						
13	NEW FOREIGN AUTOS M,P,G,					
14	WITH TAX ONLY	29.14	30.04	30.74	31.65	32.35
15	BASELINE	29.11	30.00	30.69	31.57	32.28
16	DIFFERENCE	0.03	0.04	0.05	0.07	0.07
17	% DIFFERENCE	0.12	0.12	0.16	0.23	0.23
18						
19						
20	SHARE OF NEW REGISTRATIONS:					
21						
22	SUBCOMPACT					
23	WITH TAX ONLY	0.196	0.195	0.192	0.189	0.185
24	BASELINE	0.188	0.187	0.182	0.176	0.172
25	DIFFERENCE	0.008	0.007	0.010	0.013	0.012
26	% DIFFERENCE	4.03	3.96	5.32	7.26	7.10
27						
28	COMPACT					
29	WITH TAX ONLY	0.228	0.226	0.232	0.236	0.235
30	BASELINE	0.215	0.218	0.221	0.220	0.220
31	DIFFERENCE	0.009	0.008	0.011	0.016	0.015
32	% DIFFERENCE	3.99	3.88	5.19	7.10	6.90
33						
34	MID-SIZE					
35	WITH TAX ONLY	0.276	0.272	0.270	0.272	0.267
36	BASELINE	0.270	0.267	0.265	0.263	0.262
37	DIFFERENCE	0.005	0.005	0.005	0.009	0.005
38	% DIFFERENCE	1.97	1.81	1.82	3.52	1.82
39						
40	FULL-SIZE					
41	WITH TAX ONLY	0.209	0.210	0.207	0.203	0.211
42	BASELINE	0.230	0.230	0.233	0.240	0.243
43	DIFFERENCE	-0.021	-0.020	-0.026	-0.037	-0.032
44	% DIFFERENCE	-9.17	-8.82	-10.99	-15.46	-13.04
45						
46	LUXURY					
47	WITH TAX ONLY	0.096	0.097	0.099	0.100	0.103
48	BASELINE	0.096	0.098	0.099	0.101	0.103
49	DIFFERENCE	-0.000	-0.000	-0.000	-0.001	-0.000
50	% DIFFERENCE	-0.00	-0.02	-0.02	-0.57	-0.00

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 3.01 SHARES BY SIZE CLASS

LINE	I T E M	1975	1976	1977	1978	1979	1980
1	SHARES OF DESIRED STOCK:						
2							
3	SUBCOMPACTS						
4	WITH TAX ONLY	0.231	0.204	0.204	0.210	0.204	0.202
5	BASELINE	0.231	0.204	0.204	0.205	0.200	0.198
6	DIFFERENCE	0.0	0.0	0.0	0.005	0.004	0.004
7	% DIFFERENCE	0.0	0.0	0.0	2.40	2.19	2.05
8							
9	COMPACTS						
10	WITH TAX ONLY	0.188	0.189	0.178	0.178	0.183	0.191
11	BASELINE	0.188	0.189	0.178	0.174	0.179	0.187
12	DIFFERENCE	0.0	0.0	0.0	0.004	0.004	0.004
13	% DIFFERENCE	0.0	0.0	0.0	2.40	2.19	2.05
14							
15	MID-SIZE						
16	WITH TAX ONLY	0.264	0.263	0.261	0.266	0.265	0.267
17	BASELINE	0.264	0.263	0.261	0.262	0.261	0.263
18	DIFFERENCE	0.0	0.0	0.0	0.004	0.004	0.004
19	% DIFFERENCE	0.0	0.0	0.0	1.65	1.83	1.33
20							
21	FULL SIZE						
22	WITH TAX ONLY	0.224	0.252	0.265	0.256	0.255	0.247
23	BASELINE	0.224	0.252	0.265	0.268	0.267	0.258
24	DIFFERENCE	0.0	0.0	0.0	-0.013	-0.012	-0.011
25	% DIFFERENCE	0.0	0.0	0.0	-4.91	-4.39	-4.30
26							
27	LUXURY						
28	WITH TAX ONLY	0.092	0.092	0.092	0.092	0.092	0.094
29	BASELINE	0.092	0.092	0.092	0.092	0.093	0.094
30	DIFFERENCE	0.0	0.0	0.0	-0.000	-0.000	-0.000
31	% DIFFERENCE	0.0	0.0	0.0	-0.24	-0.35	-0.33

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 3.01 SHARES BY SIZE CLASS

LINE	I T E M	1981	1982	1983	1984	1985
1	SHARES OF DESIRED STOCK:					
2						
3	SUBCOMPACTS					
4	WITH TAX ONLY	0.199	0.198	0.196	0.193	0.189
5	BASELINE	0.193	0.192	0.188	0.183	0.179
6	DIFFERENCE	0.006	0.006	0.008	0.010	0.010
7	% DIFFERENCE	3.05	3.12	4.13	5.59	5.72
8						
9	COMPACTS					
10	WITH TAX ONLY	0.203	0.207	0.212	0.217	0.218
11	BASELINE	0.197	0.200	0.204	0.205	0.206
12	DIFFERENCE	0.006	0.006	0.008	0.011	0.012
13	% DIFFERENCE	3.05	3.12	4.13	5.59	5.72
14						
15	MID-SIZE					
16	WITH TAX ONLY	0.269	0.270	0.270	0.273	0.271
17	BASELINE	0.266	0.266	0.267	0.267	0.267
18	DIFFERENCE	0.004	0.004	0.004	0.006	0.004
19	% DIFFERENCE	1.37	1.39	1.42	2.34	1.63
20						
21	FULL SIZE					
22	WITH TAX ONLY	0.238	0.229	0.224	0.219	0.221
23	BASELINE	0.249	0.245	0.243	0.246	0.247
24	DIFFERENCE	-0.015	-0.016	-0.020	-0.027	-0.026
25	% DIFFERENCE	-6.10	-6.35	-8.02	-11.08	-10.82
26						
27	LUXURY					
28	WITH TAX ONLY	0.095	0.096	0.097	0.099	0.101
29	BASELINE	0.095	0.097	0.098	0.099	0.101
30	DIFFERENCE	-0.000	-0.000	-0.000	-0.001	-0.001
31	% DIFFERENCE	-0.41	-0.43	-0.50	-0.67	-0.61

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 3.02 SHARES BY SIZE CLASS - CONTINUED

LINE	I T E M	1975	1976	1977	1978	1979	1980
1	SHARES OF ACTUAL YR-END STOCKS						
2							
3	SUBCOMPACT						
4	WITH TAX ONLY	0.168	0.180	0.190	0.199	0.206	0.210
5	BASELINE	0.168	0.180	0.190	0.198	0.204	0.208
6	DIFFERENCE	0.0	0.0	0.0	0.001	0.001	0.002
7	% DIFFERENCE	0.0	0.0	0.0	0.38	0.68	0.93
8							
9	COMPACT						
10	WITH TAX ONLY	0.175	0.177	0.179	0.180	0.182	0.185
11	BASELINE	0.175	0.177	0.179	0.179	0.181	0.183
12	DIFFERENCE	0.0	0.0	0.0	0.001	0.001	0.002
13	% DIFFERENCE	0.0	0.0	0.0	0.35	0.67	0.96
14							
15	MID-SIZE						
16	WITH TAX ONLY	0.231	0.236	0.240	0.245	0.249	0.254
17	BASELINE	0.231	0.236	0.240	0.244	0.248	0.252
18	DIFFERENCE	0.0	0.0	0.0	0.001	0.002	0.002
19	% DIFFERENCE	0.0	0.0	0.0	0.35	0.83	0.84
20							
21	FULL SIZE						
22	WITH TAX ONLY	0.338	0.318	0.301	0.286	0.272	0.259
23	BASELINE	0.338	0.318	0.301	0.288	0.276	0.265
24	DIFFERENCE	0.0	0.0	0.0	-0.002	-0.004	-0.006
25	% DIFFERENCE	0.0	0.0	0.0	-0.77	-1.47	-2.14
26							
27	LUXURY						
28	WITH TAX ONLY	0.087	0.089	0.090	0.090	0.091	0.091
29	BASELINE	0.087	0.089	0.090	0.090	0.091	0.092
30	DIFFERENCE	0.0	0.0	0.0	-0.000	-0.000	-0.000
31	% DIFFERENCE	0.0	0.0	0.0	-0.04	-0.08	-0.12

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX ONLY POLICY

TABLE 3.02 SHARES BY SIZE CLASS - CONTINUED

LINE	ITEM	1981	1982	1983	1984	1985
1	SHARES OF ACTUAL YR-END STOCKS					
2						
3	SUBCOMPACT					
4	WITH TAX ONLY	0,212	0,213	0,211	0,208	0,205
5	BASELINE	0,210	0,209	0,207	0,203	0,198
6	DIFFERENCE	0,003	0,003	0,004	0,006	0,007
7	% DIFFERENCE	1,30	1,66	2,16	2,85	3,50
8						
9	COMPACT					
10	WITH TAX ONLY	0,190	0,195	0,201	0,206	0,211
11	BASELINE	0,187	0,192	0,196	0,200	0,204
12	DIFFERENCE	0,003	0,004	0,005	0,006	0,008
13	% DIFFERENCE	1,40	1,83	2,37	3,14	3,81
14						
15	MID-SIZE					
16	WITH TAX ONLY	0,258	0,263	0,266	0,268	0,270
17	BASELINE	0,256	0,259	0,262	0,264	0,265
18	DIFFERENCE	0,003	0,003	0,004	0,004	0,005
19	% DIFFERENCE	1,03	1,19	1,38	1,68	1,79
20						
21	FULL SIZE					
22	WITH TAX ONLY	0,247	0,237	0,229	0,222	0,218
23	BASELINE	0,255	0,247	0,241	0,238	0,237
24	DIFFERENCE	-0,008	-0,010	-0,012	-0,016	-0,019
25	% DIFFERENCE	-3,07	-4,01	-5,14	-6,80	-8,04
26						
27	LUXURY					
28	WITH TAX ONLY	0,092	0,093	0,094	0,095	0,096
29	BASELINE	0,092	0,093	0,094	0,095	0,096
30	DIFFERENCE	-0,000	-0,000	-0,000	-0,000	-0,000
31	% DIFFERENCE	-0,16	-0,20	-0,25	-0,31	-0,351

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 3.03 SHARES BY SIZE CLASS - CONTINUED

LINE	I T E M	1975	1976	1977	1978	1979	1980
1	DOMESTIC SHARE OF NEW REGISTRATIONS						
2							
3	DOMESTIC SHARE OF TOTAL						
4	WITH TAX ONLY	0.818	0.852	0.859	0.858	0.869	0.874
5	BASELINE	0.818	0.852	0.859	0.862	0.872	0.877
6	DIFFERENCE	0.0	0.0	0.0	-0.004	-0.004	-0.003
7	% DIFFERENCE	0.0	0.0	0.0	-0.50	-0.41	-0.34
8							
9	DOMESTIC SHARE OF SUBCOMPACTS						
10	WITH TAX ONLY	0.4694	0.4573	0.4600	0.4600	0.4700	0.4800
11	BASELINE	0.4694	0.4573	0.4600	0.4600	0.4700	0.4800
12	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
13	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
14							
15	DOMESTIC SHARE OF COMPACTS						
16	WITH TAX ONLY	0.9268	0.9468	0.9400	0.9400	0.9450	0.9450
17	BASELINE	0.9268	0.9468	0.9400	0.9400	0.9450	0.9450
18	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
19	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
20							
21	DOMESTIC SHARE OF LUXURY						
22	WITH TAX ONLY	0.8792	0.9005	0.9000	0.9050	0.9100	0.9100
23	BASELINE	0.8792	0.9005	0.9000	0.9050	0.9100	0.9100
24	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
25	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
MEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 3.03 SHARES BY SIZE CLASS - CONTINUED

LINE	I T E M	1981	1982	1983	1984	1985
1	DOMESTIC SHARE OF NEW REGISTRATIONS:					
2						
3	DOMESTIC SHARE OF TOTAL					
4	WITH TAX ONLY	0.880	0.881	0.882	0.883	0.885
5	BASELINE	0.885	0.885	0.887	0.890	0.892
6	DIFFERENCE	-0.004	-0.004	-0.005	-0.007	-0.007
7	% DIFFERENCE	-0.48	-0.47	-0.62	-0.81	-0.78
8						
9	DOMESTIC SHARE OF SUBCOMPACTS					
10	WITH TAX ONLY	0.4900	0.4900	0.4900	0.4900	0.4900
11	BASELINE	0.4900	0.4900	0.4900	0.4900	0.4900
12	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
13	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0
14						
15	DOMESTIC SHARE OF COMPACTS					
16	WITH TAX ONLY	0.9500	0.9500	0.9500	0.9500	0.9500
17	BASELINE	0.9500	0.9500	0.9500	0.9500	0.9500
18	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
19	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0
20						
21	DOMESTIC SHARE OF LUXURY					
22	WITH TAX ONLY	0.9100	0.9100	0.9100	0.9100	0.9100
23	BASELINE	0.9100	0.9100	0.9100	0.9100	0.9100
24	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
25	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
MEPA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 3.04 NEW REGISTRATIONS BY SIZE CLASS

LINE	I T E M	1975	1976	1977	1978	1979	1980
1	NEW REGISTRATIONS						
2							
3	SUBCOMPACT MILL AUTOS						
4	WITH TAX ONLY	2,427	2,348	2,441	2,505	2,405	2,412
5	BASELINE	2,427	2,348	2,441	2,441	2,333	2,346
6	DIFFERENCE	0,0	0,0	0,0	0,064	0,072	0,066
7	% DIFFERENCE	0,0	0,0	0,0	2,61	3,06	2,79
8							
9	COMPACT MILL AUTOS						
10	WITH TAX ONLY	1,825	1,768	1,999	2,003	2,175	2,402
11	BASELINE	1,825	1,768	1,999	1,952	2,110	2,337
12	DIFFERENCE	0,0	0,0	0,0	0,051	0,065	0,065
13	% DIFFERENCE	0,0	0,0	0,0	2,61	3,08	2,79
14							
15	MID-SIZE MILL AUTOS						
16	WITH TAX ONLY	1,905	2,968	3,073	3,135	3,140	3,248
17	BASELINE	1,905	2,968	3,073	3,064	3,063	3,180
18	DIFFERENCE	0,0	0,0	0,0	0,071	0,077	0,068
19	% DIFFERENCE	0,0	0,0	0,0	2,31	2,51	2,14
20							
21	FULL SIZE MILL AUTOS						
22	WITH TAX ONLY	1,808	1,838	2,427	2,378	2,589	2,630
23	BASELINE	1,808	1,838	2,427	2,636	2,793	2,811
24	DIFFERENCE	0,0	0,0	0,0	-0,258	-0,203	-0,181
25	% DIFFERENCE	0,0	0,0	0,0	-9,79	-7,28	-6,43
26							
27	LUXURY MILL AUTOS						
28	WITH TAX ONLY	0,786	0,985	1,013	1,008	1,046	1,108
29	BASELINE	0,786	0,985	1,013	1,018	1,050	1,111
30	DIFFERENCE	0,0	0,0	0,0	-0,011	-0,004	-0,003
31	% DIFFERENCE	0,0	0,0	0,0	-1,06	-0,37	-0,26

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 3.04 NEW REGISTRATIONS BY SIZE CLASS

LINE	I T E M	1981	1982	1983	1984	1985
1	NEW REGISTRATIONS					
2						
3	SUBCOMPACT MILL AUTOS					
4	WITH TAX ONLY	2,332	2,380	2,394	2,559	2,578
5	BASELINE	2,257	2,287	2,287	2,395	2,414
6	DIFFERENCE	0,075	0,093	0,107	0,164	0,164
7	% DIFFERENCE	3,34	4,07	4,69	6,85	6,79
8						
9	COMPACT MILL AUTOS					
10	WITH TAX ONLY	2,667	2,765	2,897	3,197	3,278
11	BASELINE	2,582	2,660	2,771	2,996	3,075
12	DIFFERENCE	0,085	0,106	0,126	0,200	0,203
13	% DIFFERENCE	3,31	3,98	4,56	6,69	6,59
14						
15	MID-SIZE MILL AUTOS					
16	WITH TAX ONLY	3,288	3,327	3,363	3,682	3,722
17	BASELINE	3,246	3,264	3,323	3,571	3,666
18	DIFFERENCE	0,042	0,063	0,040	0,112	0,056
19	% DIFFERENCE	1,30	1,92	1,21	3,13	1,52
20						
21	FULL SIZE MILL AUTOS					
22	WITH TAX ONLY	2,494	2,565	2,583	2,749	2,948
23	BASELINE	2,764	2,810	2,919	3,264	3,400
24	DIFFERENCE	-0,270	-0,245	-0,336	-0,515	-0,452
25	% DIFFERENCE	-9,77	-8,73	-11,52	-15,79	-13,29
26						
27	LUXURY MILL AUTOS					
28	WITH TAX ONLY	1,140	1,169	1,232	1,360	1,433
29	BASELINE	1,152	1,193	1,245	1,373	1,445
30	DIFFERENCE	-0,012	-0,008	-0,013	-0,013	-0,011
31	% DIFFERENCE	-1,05	-0,32	-1,01	-0,95	-0,78

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX ONLY POLICY

TABLE 3.05 STOCKS BY SIZE CLASS

LINE	I T E M	1975	1976	1977	1978	1979	1980
1	DESIRED STOCKS						
2							
3	SUBCOMPACT MILL AUTO						
4	WITH TAX ONLY	22,300	20,296	20,808	22,026	21,840	21,929
5	BASELINE	22,300	20,296	20,808	21,524	21,381	21,493
6	DIFFERENCE	0,0	0,0	0,0	0,502	0,459	0,436
7	% DIFFERENCE	0,0	0,0	0,0	2,33	2,15	2,03
8							
9	COMPACT MILL AUTO						
10	WITH TAX ONLY	18,233	18,871	18,205	18,680	19,591	20,658
11	BASELINE	18,233	18,871	18,205	18,254	19,179	20,247
12	DIFFERENCE	0,0	0,0	0,0	0,426	0,412	0,410
13	% DIFFERENCE	0,0	0,0	0,0	2,33	2,15	2,03
14							
15	MID-SIZE MILL AUTO						
16	WITH TAX ONLY	25,582	26,207	26,690	27,908	28,334	28,918
17	BASELINE	25,582	26,207	26,690	27,477	27,947	28,544
18	DIFFERENCE	0,0	0,0	0,0	0,430	0,387	0,374
19	% DIFFERENCE	0,0	0,0	0,0	1,57	1,39	1,31
20							
21	FULL SIZE MILL AUTO						
22	WITH TAX ONLY	21,695	25,113	27,018	26,705	27,329	26,762
23	BASELINE	21,695	25,113	27,018	28,100	28,597	27,971
24	DIFFERENCE	0,0	0,0	0,0	-1,396	-1,267	-1,210
25	% DIFFERENCE	0,0	0,0	0,0	-4,97	-4,43	-4,32
26							
27	LUXURY MILL AUTO						
28	WITH TAX ONLY	8,915	9,198	9,389	9,627	9,894	10,164
29	BASELINE	8,915	9,198	9,389	9,656	9,933	10,200
30	DIFFERENCE	0,0	0,0	0,0	-0,029	-0,039	-0,036
31	% DIFFERENCE	0,0	0,0	0,0	-0,30	-0,39	-0,35

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 3.05 STOCKS BY SIZE CLASS

LINE	I T E M		1981	1982	1983	1984	1985
1	DESIRED STOCK						
2							
3	SUBCOMPACT	MILL AUTO					
4	WITH TAX ONLY		21,777	21,931	21,987	22,147	22,193
5	BASELINE		21,149	21,283	21,140	21,005	21,028
6	DIFFERENCE		0,628	0,648	0,846	1,142	1,165
7	% DIFFERENCE		2,97	3,04	4,00	5,44	5,54
8							
9	COMPACT	MILL AUTO					
10	WITH TAX ONLY		22,265	22,878	23,813	24,852	25,646
11	BASELINE		21,623	22,203	22,896	23,570	24,300
12	DIFFERENCE		0,642	0,676	0,917	1,281	1,347
13	% DIFFERENCE		2,97	3,04	4,00	5,44	5,54
14							
15	MID-SIZE	MILL AUTO					
16	WITH TAX ONLY		29,491	29,856	30,315	31,285	31,874
17	BASELINE		29,115	29,470	29,928	30,615	31,417
18	DIFFERENCE		0,376	0,386	0,387	0,670	0,458
19	% DIFFERENCE		1,29	1,31	1,29	2,19	1,46
20							
21	FULL SIZE	MILL AUTO					
22	WITH TAX ONLY		25,571	25,358	25,108	25,078	26,008
23	BASELINE		27,253	27,098	27,331	28,245	29,081
24	DIFFERENCE		-1,682	-1,740	-2,223	-3,167	-3,073
25	% DIFFERENCE		-6,17	-6,42	-8,13	-11,21	-10,57
26							
27	LUXURY	MILL AUTO					
28	WITH TAX ONLY		10,399	10,647	10,924	11,324	11,824
29	BASELINE		10,450	10,701	10,992	11,416	11,916
30	DIFFERENCE		-0,051	-0,054	-0,068	-0,092	-0,092
31	% DIFFERENCE		-0,48	-0,50	-0,62	-0,81	-0,77

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 3.06 STOCKS BY SIZE CLASS - CONTINUED

LINE	I T E M		1975	1976	1977	1978	1979	1980
1	YEAR-END ACTUAL STOCKS:							
2								
3	SUBCOMPACT	MILL AUTO						
4	WITH TAX ONLY		16,296	17,929	19,409	20,893	22,005	22,804
5	BASELINE		16,296	17,929	19,409	20,827	21,867	22,600
6	DIFFERENCE		0,0	0,0	0,0	0,066	0,138	0,204
7	% DIFFERENCE		0,0	0,0	0,0	0,32	0,63	0,90
8								
9	COMPACT	MILL AUTO						
10	WITH TAX ONLY		16,965	17,643	18,254	18,896	19,482	20,076
11	BASELINE		16,965	17,643	18,254	18,843	19,361	19,890
12	DIFFERENCE		0,0	0,0	0,0	0,054	0,120	0,186
13	% DIFFERENCE		0,0	0,0	0,0	0,29	0,62	0,93
14								
15	MID-SIZE	MILL AUTO						
16	WITH TAX ONLY		22,329	23,542	24,523	25,695	26,652	27,502
17	BASELINE		22,329	23,542	24,523	25,620	26,499	27,280
18	DIFFERENCE		0,0	0,0	0,0	0,075	0,154	0,222
19	% DIFFERENCE		0,0	0,0	0,0	0,29	0,58	0,81
20								
21	FULL SIZE	MILL AUTO						
22	WITH TAX ONLY		32,701	31,740	30,776	29,998	29,139	28,133
23	BASELINE		32,701	31,740	30,776	30,249	29,588	28,756
24	DIFFERENCE		0,0	0,0	0,0	-0,251	-0,449	-0,623
25	% DIFFERENCE		0,0	0,0	0,0	-0,83	-1,52	-2,17
26								
27	LUXURY	MILL AUTO						
28	WITH TAX ONLY		8,835	8,830	9,144	9,863	9,710	9,816
29	BASELINE		8,835	8,830	9,144	9,873	9,723	9,930
30	DIFFERENCE		0,0	0,0	0,0	-0,009	-0,012	-0,014
31	% DIFFERENCE		0,0	0,0	0,0	-0,10	-0,12	-0,14

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX ONLY POLICY

TABLE 3.06 STOCKS BY SIZE CLASS - CONTINUED

LINE	I T E M		1981	1982	1983	1984	1985
1	YEAR-END ACTUAL STOCKS:						
2							
3	SUBCOMPACT	MILL AUTO					
4	WITH TAX ONLY		23,251	23,527	23,689	23,907	24,060
5	BASELINE		22,971	23,159	23,219	23,278	23,286
6	DIFFERENCE		0,280	0,367	0,471	0,628	0,775
7	% DIFFERENCE		1,22	1,59	2,03	2,70	3,33
8							
9	COMPACT	MILL AUTO					
10	WITH TAX ONLY		20,820	21,603	22,501	23,663	24,847
11	BASELINE		20,548	21,231	22,007	22,975	23,975
12	DIFFERENCE		0,272	0,372	0,494	0,688	0,872
13	% DIFFERENCE		1,32	1,75	2,25	2,99	3,64
14							
15	MID-SIZE	MILL AUTO					
16	WITH TAX ONLY		28,293	29,052	29,797	30,778	31,693
17	BASELINE		28,028	28,731	29,439	30,314	31,188
18	DIFFERENCE		0,265	0,321	0,358	0,464	0,504
19	% DIFFERENCE		0,95	1,12	1,21	1,53	1,62
20							
21	FULL SIZE	MILL AUTO					
22	WITH TAX ONLY		27,044	26,200	25,638	25,462	25,657
23	BASELINE		27,924	27,315	27,062	27,358	27,946
24	DIFFERENCE		-0,880	-1,115	-1,424	-1,896	-2,289
25	% DIFFERENCE		-3,15	-4,08	-5,26	-6,93	-8,19
26							
27	LUXURY	MILL AUTO					
28	WITH TAX ONLY		10,096	10,289	10,522	10,876	11,288
29	BASELINE		10,120	10,318	10,561	10,925	11,347
30	DIFFERENCE		-0,025	-0,029	-0,039	-0,049	-0,058
31	% DIFFERENCE		-0,24	-0,28	-0,37	-0,45	-0,51

A PRODUCT OF WHARTON EFA, INC.

95-139 O - 77 - 19

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 3.07 CAPITALIZED COSTS PER MILE

LINE	I T E M		1975	1976	1977	1978	1979	1980
1	AVG NOMINAL CAP. COST PER MILE	$/MILE						
2	WITH TAX ONLY		0.195	0.208	0.222	0.238	0.254	0.269
3	BASELINE		0.195	0.208	0.222	0.238	0.253	0.269
4	DIFFERENCE		0.0	0.0	0.0	-0.000	0.000	0.000
5	% DIFFERENCE		0.0	0.0	0.0	-0.00	0.05	0.04
6								
7	AVG REAL CAP. COST PER MILE	1972 $						
8	WITH TAX ONLY		0.152	0.153	0.154	0.157	0.159	0.161
9	BASELINE		0.152	0.153	0.154	0.157	0.159	0.161
10	DIFFERENCE		0.0	0.0	0.0	-0.000	0.000	0.000
11	% DIFFERENCE		0.0	0.0	0.0	-0.00	0.05	0.04
12								
13	CAPITALIZED COST PER MILE BY SIZE							
14								
15	SUBCOMPACTS	$/MILE						
16	WITH TAX ONLY		0.152	0.163	0.174	0.187	0.199	0.212
17	BASELINE		0.152	0.163	0.174	0.187	0.199	0.212
18	DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0
19	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0
20								
21	COMPACTS	$/MILE						
22	WITH TAX ONLY		0.176	0.186	0.200	0.215	0.228	0.242
23	BASELINE		0.176	0.186	0.200	0.215	0.228	0.242
24	DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0
25	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0
26								
27	MID-SIZE	$/MILE						
28	WITH TAX ONLY		0.198	0.208	0.223	0.238	0.254	0.269
29	BASELINE		0.198	0.208	0.223	0.238	0.254	0.269
30	DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0
31	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0
32								
33	FULL SIZE	$/MILE						
34	WITH TAX ONLY		0.217	0.228	0.243	0.261	0.277	0.295
35	BASELINE		0.217	0.228	0.243	0.259	0.275	0.293
36	DIFFERENCE		0.0	0.0	0.0	0.002	0.002	0.002
37	% DIFFERENCE		0.0	0.0	0.0	0.74	0.69	0.65
38								
39	LUXURY	$/MILE						
40	WITH TAX ONLY		0.281	0.293	0.313	0.336	0.359	0.382
41	BASELINE		0.281	0.293	0.313	0.335	0.357	0.379
42	DIFFERENCE		0.0	0.0	0.0	0.002	0.003	0.003
43	% DIFFERENCE		0.0	0.0	0.0	0.50	0.77	0.73

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 3.07 CAPITALIZED COSTS PER MILE

LINE	I T E M		1981	1982	1983	1984	1985
1	AVG NOMINAL CAP. COST PER MILE	$/MILE					
2	WITH TAX ONLY		0.284	0.299	0.315	0.332	0.351
3	BASELINE		0.284	0.299	0.314	0.332	0.350
4	DIFFERENCE		0.000	0.000	0.001	0.001	0.001
5	% DIFFERENCE		0.13	0.14	0.24	0.26	0.41
6							
7	AVG REAL CAP. COST PER MILE	1972 $					
8	WITH TAX ONLY		0.163	0.165	0.167	0.170	0.173
9	BASELINE		0.163	0.165	0.167	0.169	0.172
10	DIFFERENCE		0.000	0.000	0.000	0.000	0.001
11	% DIFFERENCE		0.13	0.14	0.24	0.26	0.41
12							
13	CAPITALIZED COST PER MILE BY SIZE:						
14							
15	SUBCOMPACTS	$/MILE					
16	WITH TAX ONLY		0.225	0.237	0.250	0.265	0.280
17	BASELINE		0.225	0.237	0.250	0.265	0.280
18	DIFFERENCE		0.0	0.0	0.0	0.0	0.0
19	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0
20							
21	COMPACTS	$/MILE					
22	WITH TAX ONLY		0.254	0.268	0.282	0.298	0.314
23	BASELINE		0.254	0.268	0.282	0.298	0.314
24	DIFFERENCE		0.0	0.0	0.0	0.0	0.0
25	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0
26							
27	MID-SIZE	$/MILE					
28	WITH TAX ONLY		0.285	0.300	0.316	0.333	0.352
29	BASELINE		0.284	0.299	0.314	0.330	0.348
30	DIFFERENCE		0.001	0.001	0.002	0.002	0.004
31	% DIFFERENCE		0.32	0.33	0.65	0.67	1.08
32							
33	FULL SIZE	$/MILE					
34	WITH TAX ONLY		0.312	0.328	0.345	0.365	0.384
35	BASELINE		0.309	0.325	0.341	0.358	0.377
36	DIFFERENCE		0.003	0.003	0.004	0.006	0.007
37	% DIFFERENCE		0.97	1.00	1.32	1.77	1.80
38							
39	LUXURY	$/MILE					
40	WITH TAX ONLY		0.403	0.424	0.445	0.470	0.494
41	BASELINE		0.399	0.419	0.440	0.462	0.486
42	DIFFERENCE		0.004	0.004	0.006	0.008	0.008
43	% DIFFERENCE		0.98	1.03	1.29	1.67	1.70

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 3.08 CAPITALIZED COSTS PER MILE - CONTINUED

LINE	I T E M		1975	1976	1977	1978	1979	1980
1	CAP. COST PER MILE BY FOR/DOM							
2								
3	TOTAL DOMESTIC	$/MIL						
4	WITH TAX ONLY		0.196	0.210	0.225	0.242	0.257	0.273
5	BASELINE		0.196	0.210	0.225	0.242	0.258	0.273
6	DIFFERENCE		0.0	0.0	0.0	-0.000	-0.000	0.000
7	% DIFFERENCE		0.0	0.0	0.0	-0.10	-0.01	0.00
8								
9	TOTAL FOREIGN	$/MIL						
10	WITH TAX ONLY		0.166	0.178	0.190	0.203	0.217	0.234
11	BASELINE		0.166	0.178	0.190	0.203	0.218	0.234
12	DIFFERENCE		0.0	0.0	0.0	-0.000	-0.000	-0.000
13	% DIFFERENCE		0.0	0.0	0.0	-0.24	-0.21	-0.20
14								
15	DOMESTIC SUBCOMPACT	$/MIL						
16	WITH TAX ONLY		0.154	0.163	0.176	0.188	0.201	0.213
17	BASELINE		0.154	0.163	0.176	0.188	0.201	0.213
18	DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0
19	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0
20								
21	FOREIGN SUBCOMPACT	$/MIL						
22	WITH TAX ONLY		0.151	0.163	0.173	0.185	0.198	0.211
23	BASELINE		0.151	0.163	0.173	0.185	0.198	0.211
24	DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0
25	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0
26								
27	DOMESTIC COMPACT	$/MIL						
28	WITH TAX ONLY		0.174	0.185	0.198	0.213	0.226	0.239
29	BASELINE		0.174	0.185	0.198	0.213	0.226	0.239
30	DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0
31	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0
32								
33	FOREIGN COMPACT	$/MIL						
34	WITH TAX ONLY		0.199	0.216	0.229	0.245	0.263	0.282
35	BASELINE		0.199	0.216	0.229	0.245	0.263	0.282
36	DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0
37	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0
38								
39	DOMESTIC LUXURY	$/MIL						
40	WITH TAX ONLY		0.276	0.287	0.307	0.330	0.353	0.374
41	BASELINE		0.276	0.287	0.307	0.328	0.349	0.371
42	DIFFERENCE		0.0	0.0	0.0	0.002	0.003	0.003
43	% DIFFERENCE		0.0	0.0	0.0	0.59	0.87	0.82
44								
45	FOREIGN LUXURY	$/MIL						
46	WITH TAX ONLY		0.318	0.350	0.371	0.397	0.428	0.462
47	BASELINE		0.318	0.350	0.371	0.398	0.428	0.462
48	DIFFERENCE		0.0	0.0	0.0	-0.001	0.0	0.0
49	% DIFFERENCE		0.0	0.0	0.0	-0.20	0.0	0.0

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
HEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 3.08 CAPITALIZED COSTS PER MILE - CONTINUED

LINE	I T E M		1981	1982	1983	1984	1985
1	CAP. COST PER MILE BY FOR/DOM						
2							
3	TOTAL DOMESTIC	$/MIL					
4	WITH TAX ONLY		0.288	0.303	0.318	0.336	0.355
5	BASELINE		0.287	0.302	0.318	0.335	0.353
6	DIFFERENCE		0.000	0.000	0.001	0.001	0.002
7	% DIFFERENCE		0.08	0.11	0.22	0.20	0.43
8							
9	TOTAL FOREIGN	$/MIL					
10	WITH TAX ONLY		0.251	0.266	0.283	0.301	0.320
11	BASELINE		0.252	0.267	0.284	0.303	0.322
12	DIFFERENCE		-0.001	-0.001	-0.001	-0.001	-0.002
13	% DIFFERENCE		-0.38	-0.26	-0.34	-0.48	-0.47
14							
15	DOMESTIC SUBCOMPACT	$/MIL					
16	WITH TAX ONLY		0.225	0.237	0.249	0.263	0.278
17	BASELINE		0.225	0.237	0.249	0.263	0.278
18	DIFFERENCE		0.0	0.0	0.0	0.0	0.0
19	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0
20							
21	FOREIGN SUBCOMPACT	$/MIL					
22	WITH TAX ONLY		0.224	0.237	0.251	0.266	0.281
23	BASELINE		0.224	0.237	0.251	0.266	0.281
24	DIFFERENCE		0.0	0.0	0.0	0.0	0.0
25	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0
26							
27	DOMESTIC COMPACT	$/MIL					
28	WITH TAX ONLY		0.252	0.265	0.279	0.294	0.311
29	BASELINE		0.252	0.265	0.279	0.294	0.311
30	DIFFERENCE		0.0	0.0	0.0	0.0	0.0
31	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0
32							
33	FOREIGN COMPACT	$/MIL					
34	WITH TAX ONLY		0.300	0.319	0.338	0.359	0.380
35	BASELINE		0.300	0.319	0.338	0.359	0.380
36	DIFFERENCE		0.0	0.0	0.0	0.0	0.0
37	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0
38							
39	DOMESTIC LUXURY	$/MIL					
40	WITH TAX ONLY		0.398	0.413	0.433	0.457	0.479
41	BASELINE		0.390	0.409	0.427	0.449	0.471
42	DIFFERENCE		0.004	0.005	0.006	0.008	0.009
43	% DIFFERENCE		1.08	1.12	1.38	1.78	1.81
44							
45	FOREIGN LUXURY	$/MIL					
46	WITH TAX ONLY		0.496	0.530	0.566	0.605	0.643
47	BASELINE		0.495	0.528	0.563	0.600	0.638
48	DIFFERENCE		0.001	0.002	0.003	0.005	0.005
49	% DIFFERENCE		0.18	0.39	0.57	0.81	0.821

95-188 O - 77 - 20

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX ONLY POLICY

TABLE 3.09 MISCELLANEOUS

LINE	I T E M		1975	1976	1977	1978	1979	1980
1	DESIRED STOCK PER FAMILY	AUTOS						
2	WITH TAX ONLY		1.252	1.261	1.278	1.293	1.300	1.302
3	BASELINE		1.252	1.261	1.278	1.293	1.300	1.302
4	DIFFERENCE		0.0	0.0	0.0	0.000	-0.000	-0.000
5	% DIFFERENCE		0.0	0.0	0.0	0.00	-0.01	-0.01
6								
7	YEAR-END STOCK PER FAMILY	AUTOS						
8	WITH TAX ONLY		1.292	1.299	1.307	1.320	1.322	1.318
9	BASELINE		1.292	1.299	1.307	1.320	1.323	1.318
10	DIFFERENCE		0.0	0.0	0.0	-0.001	-0.001	-0.000
11	% DIFFERENCE		0.0	0.0	0.0	-0.06	-0.05	-0.02
12								
13	VEHICLE MILES PER FAMILY	THOU MILES						
14	WITH TAX ONLY		13.727	13.407	13.216	13.076	13.030	13.015
15	BASELINE		13.727	13.407	13.216	13.079	13.040	13.021
16	DIFFERENCE		0.0	0.0	0.0	-0.002	-0.010	-0.006
17	% DIFFERENCE		0.0	0.0	0.0	-0.02	-0.08	-0.05
18								
19	VEHICLE MILES PER AUTO	THOU MILES						
20	WITH TAX ONLY		10.778	10.478	10.236	10.045	9.950	9.944
21	BASELINE		10.778	10.478	10.236	10.044	9.952	9.945
22	DIFFERENCE		0.0	0.0	0.0	0.001	-0.002	-0.001
23	% DIFFERENCE		0.0	0.0	0.0	0.01	-0.02	-0.01
24								
25	RATIO-NEW REGIS. TO BEGIN. STOCK	RATIO						
26	WITH TAX ONLY		0.0889	0.1020	0.1099	0.1080	0.1082	0.1103
27	BASELINE		0.0889	0.1020	0.1099	0.1088	0.1081	0.1101
28	DIFFERENCE		0.0	0.0	0.0	-0.0008	0.0001	0.0002
29	% DIFFERENCE		0.0	0.0	0.0	-0.75	0.12	0.17
30								
31	RATIO-SCRAPPAGE TO BEGIN. STOCK	RATIO						
32	WITH TAX ONLY		0.0591	0.0714	0.0856	0.0802	0.0887	0.0968
33	BASELINE		0.0591	0.0714	0.0856	0.0804	0.0888	0.0968
34	DIFFERENCE		0.0	0.0	0.0	-0.0002	-0.0001	-0.0000
35	% DIFFERENCE		0.0	0.0	0.0	-0.22	-0.06	-0.03
36								
37	REAL DISP. INCOME PER FAMILY THOU '72 $							
38	WITH TAX ONLY		9.406	9.481	9.685	9.858	10.040	10.234
39	BASELINE		9.406	9.481	9.685	9.858	10.040	10.234
40	DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0
41	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0
42								
43	FAMILIES WITH INCOME OVER $15,000	%						
44	WITH TAX ONLY		22.05	20.94	20.23	20.09	21.04	22.60
45	BASELINE		22.05	20.94	20.23	20.09	21.04	22.60
46	DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0
47	% DIFFERENCE		0.0	0.0	0.0	0.0	0.0	0.0

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 3.09 MISCELLANEOUS

LINE	I T E M		1981	1982	1983	1984	1985
1	DESIRED STOCK PER FAMILY	AUTOS					
2	WITH TAX ONLY		1,304	1,303	1,302	1,303	1,305
3	BASELINE		1,304	1,304	1,303	1,303	1,306
4	DIFFERENCE		-0,000	-0,000	-0,001	-0,001	-0,001
5	% DIFFERENCE		-0,02	-0,03	-0,05	-0,05	-0,08
6							
7	YEAR-END STOCK PER FAMILY	AUTOS					
8	WITH TAX ONLY		1,307	1,297	1,292	1,300	1,311
9	BASELINE		1,308	1,298	1,294	1,301	1,313
10	DIFFERENCE		-0,001	-0,001	-0,002	-0,002	-0,002
11	% DIFFERENCE		-0,08	-0,08	-0,13	-0,18	-0,17
12							
13	VEHICLE MILES PER FAMILY	THOU MILES					
14	WITH TAX ONLY		12,962	12,921	12,911	12,949	13,102
15	BASELINE		12,967	12,931	12,920	12,963	13,118
16	DIFFERENCE		-0,004	-0,011	-0,009	-0,014	-0,015
17	% DIFFERENCE		-0,03	-0,08	-0,07	-0,11	-0,12
18							
19	VEHICLE MILES PER AUTO	THOU MILES					
20	WITH TAX ONLY		9,970	10,015	10,060	10,076	10,115
21	BASELINE		9,968	10,016	10,056	10,073	10,111
22	DIFFERENCE		0,002	-0,000	0,003	0,003	0,004
23	% DIFFERENCE		0,02	-0,00	0,03	0,03	0,04
24							
25	RATIO-NEW REGIS, TO BEGIN, STOCK	RATIO					
26	WITH TAX ONLY		0,1099	0,1117	0,1127	0,1208	0,1217
27	BASELINE		0,1107	0,1115	0,1133	0,1211	0,1219
28	DIFFERENCE		-0,0007	0,0002	-0,0006	-0,0003	-0,0002
29	% DIFFERENCE		-0,63	0,18	-0,52	-0,26	-0,15
30							
31	RATIO-SCRAPPAGE TO BEGIN, STOCK	RATIO					
32	WITH TAX ONLY		0,1001	0,1010	0,0993	0,0982	0,0968
33	BASELINE		0,1002	0,1008	0,0994	0,0983	0,0967
34	DIFFERENCE		-0,0001	0,0002	-0,0001	-0,0001	0,0000
35	% DIFFERENCE		-0,13	0,16	-0,09	-0,12	0,05
36							
37	REAL DISP, INCOME PER FAMILY	THOU '72 $					
38	WITH TAX ONLY		10,377	10,521	10,684	11,048	11,436
39	BASELINE		10,377	10,521	10,684	11,048	11,436
40	DIFFERENCE		0,0	0,0	0,0	0,0	0,0
41	% DIFFERENCE		0,0	0,0	0,0	0,0	0,0
42							
43	FAMILIES WITH INCOME OVER $15,000	%					
44	WITH TAX ONLY		24,22	25,79	27,36	29,36	31,94
45	BASELINE		24,22	25,79	27,36	29,36	31,94
46	DIFFERENCE		0,0	0,0	0,0	0,0	0,0
47	% DIFFERENCE		0,0	0,0	0,0	0,0	0,0

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
MEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 3.10 MILES PER GALLON

LINE	ITEM	1975	1976	1977	1978	1979	1980
1							
2	OVERALL FLEET MILES PER GALLON - MEFA						
3	WITH TAX ONLY	12.69	12.71	12.82	13.03	13.33	13.71
4	BASELINE	12.69	12.71	12.82	13.03	13.32	13.70
5	DIFFERENCE	0.0	0.0	0.0	0.00	0.01	0.02
6	% DIFFERENCE	0.0	0.0	0.0	0.01	0.06	0.12
7							
8	NEW AUTO MILES PER GALLON (MEFA):						
9	TOTAL						
10	WITH TAX ONLY	13.29	13.80	14.44	15.20	15.89	16.67
11	BASELINE	13.29	13.80	14.44	15.12	15.83	16.61
12	DIFFERENCE	0.0	0.0	0.0	0.08	0.06	0.06
13	% DIFFERENCE	0.0	0.0	0.0	0.50	0.41	0.37
14							
15	SUBCOMPACT						
16	WITH TAX ONLY	18.78	19.64	20.45	21.32	22.07	23.00
17	BASELINE	18.78	19.64	20.45	21.32	22.07	23.00
18	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
19	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
20							
21	COMPACT						
22	WITH TAX ONLY	13.94	14.42	15.10	15.68	16.66	17.75
23	BASELINE	13.94	14.42	15.10	15.68	16.66	17.75
24	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
25	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
26							
27	MID-SIZE						
28	WITH TAX ONLY	11.70	12.75	13.39	14.10	14.83	15.62
29	BASELINE	11.70	12.75	13.39	14.10	14.83	15.62
30	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
31	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
32							
33	FULL SIZE						
34	WITH TAX ONLY	10.80	11.56	12.42	13.19	13.97	14.58
35	BASELINE	10.80	11.56	12.42	13.19	13.97	14.58
36	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
37	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
38							
39	LUXURY						
40	WITH TAX ONLY	10.51	11.64	12.38	12.93	13.43	13.97
41	BASELINE	10.51	11.64	12.38	12.93	13.43	13.97
42	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
43	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 3,10 MILES PER GALLON

LINE	ITEM	1981	1982	1983	1984	1985
1						
2	OVERALL FLEET MILES PER GALLON - WEFA					
3	WITH TAX ONLY	14,17	14,70	15,29	15,92	16,60
4	BASELINE	14,15	14,67	15,25	15,86	16,53
5	DIFFERENCE	0,02	0,03	0,04	0,06	0,07
6	% DIFFERENCE	0,16	0,22	0,29	0,36	0,45
7						
8	NEW AUTO MILES PER GALLON (WEFA):					
9	TOTAL					
10	WITH TAX ONLY	17,37	18,07	18,79	19,54	20,17
11	BASELINE	17,28	17,97	18,66	19,36	20,01
12	DIFFERENCE	0,10	0,10	0,13	0,18	0,16
13	% DIFFERENCE	0,56	0,54	0,69	0,92	0,82
14						
15	SUBCOMPACT					
16	WITH TAX ONLY	23,76	24,57	25,28	26,03	26,68
17	BASELINE	23,76	24,57	25,28	26,03	26,68
18	DIFFERENCE	0,0	0,0	0,0	0,0	0,0
19	% DIFFERENCE	0,0	0,0	0,0	0,0	0,0
20						
21	COMPACT					
22	WITH TAX ONLY	18,79	19,55	20,34	21,17	21,88
23	BASELINE	18,79	19,55	20,38	21,17	21,88
24	DIFFERENCE	0,0	0,0	0,0	0,0	0,0
25	% DIFFERENCE	0,0	0,0	0,0	0,0	0,0
26						
27	MID-SIZE					
28	WITH TAX ONLY	16,31	16,98	17,67	18,40	19,04
29	BASELINE	16,31	16,98	17,67	18,40	19,04
30	DIFFERENCE	0,0	0,0	0,0	0,0	0,0
31	% DIFFERENCE	0,0	0,0	0,0	0,0	0,0
32						
33	FULL SIZE					
34	WITH TAX ONLY	15,07	15,71	16,38	17,11	17,78
35	BASELINE	15,07	15,71	16,38	17,11	17,78
36	DIFFERENCE	0,0	0,0	0,0	0,0	0,0
37	% DIFFERENCE	0,0	0,0	0,0	0,0	0,0
38						
39	LUXURY					
40	WITH TAX ONLY	14,42	15,05	15,70	16,38	17,02
41	BASELINE	14,42	15,05	15,70	16,38	17,02
42	DIFFERENCE	0,0	0,0	0,0	0,0	0,0
43	% DIFFERENCE	0,0	0,0	0,0	0,0	0,0

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
MEFA LONG RUN AUTO MODEL.1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX ONLY POLICY

TABLE 3.11 MILES PER GALLON - CONTINUED

LINE	I T E M	1975	1976	1977	1978	1979	1980
1	NEW AUTO M.P.G. BY FOR/DOM (MEFA)						
2							
3	TOTAL DOMESTIC						
4	WITH TAX ONLY	12.38	13.04	13.72	14.45	15.22	16.03
5	BASELINE	12.38	13.04	13.72	14.40	15.17	15.98
6	DIFFERENCE	0.0	0.0	0.0	0.05	0.05	0.05
7	% DIFFERENCE	0.0	0.0	0.0	0.37	0.31	0.30
8							
9	TOTAL FOREIGN						
10	WITH TAX ONLY	19.82	20.69	21.25	22.06	22.49	23.11
11	BASELINE	19.82	20.69	21.25	22.04	22.47	23.09
12	DIFFERENCE	0.0	0.0	0.0	0.02	0.02	0.02
13	% DIFFERENCE	0.0	0.0	0.0	0.08	0.07	0.07
14							
15	DOMESTIC SUBCOMPACT						
16	WITH TAX ONLY	17.13	17.95	18.92	19.81	20.87	22.04
17	BASELINE	17.13	17.95	18.92	19.81	20.87	22.04
18	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
19	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
20							
21	FOREIGN SUBCOMPACT						
22	WITH TAX ONLY	20.44	21.33	21.97	22.80	23.25	23.96
23	BASELINE	20.44	21.33	21.97	22.80	23.25	23.96
24	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
25	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
26							
27	DOMESTIC COMPACT						
28	WITH TAX ONLY	13.67	14.23	14.88	15.46	16.48	17.56
29	BASELINE	13.67	14.23	14.88	15.46	16.48	17.58
30	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
31	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
32							
33	FOREIGN COMPACT						
34	WITH TAX ONLY	18.41	19.06	19.57	20.14	20.57	21.20
35	BASELINE	18.41	19.06	19.57	20.14	20.57	21.20
36	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
37	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
38							
39	DOMESTIC LUXURY						
40	WITH TAX ONLY	10.08	11.32	12.07	12.65	13.16	13.70
41	BASELINE	10.08	11.32	12.07	12.65	13.16	13.70
42	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
43	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
44							
45	FOREIGN LUXURY						
46	WITH TAX ONLY	15.19	15.64	16.09	16.46	17.00	17.39
47	BASELINE	15.19	15.64	16.09	16.46	17.00	17.39
48	DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0
49	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0	0.0

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX ONLY POLICY

TABLE 3.11 MILES PER GALLON - CONTINUED

LINE	I T E M	1981	1982	1983	1984	1985
1	NEW AUTO M,P,G, BY FOR/DOM (WEFA)					
2						
3	TOTAL DOMESTIC					
4	WITH TAX ONLY	16.77	17.47	18.20	18.96	19.61
5	BASELINE	16.70	17.39	18.10	18.81	19.47
6	DIFFERENCE	0.08	0.08	0.10	0.15	0.13
7	% DIFFERENCE	0.47	0.45	0.58	0.78	0.69
8						
9	TOTAL FOREIGN					
10	WITH TAX ONLY	23.57	24.25	24.76	25.42	25.94
11	BASELINE	23.55	24.22	24.72	25.37	25.89
12	DIFFERENCE	0.02	0.03	0.03	0.05	0.05
13	% DIFFERENCE	0.10	0.11	0.14	0.20	0.20
14						
15	DOMESTIC SUBCOMPACT					
16	WITH TAX ONLY	23.07	23.94	24.85	25.59	26.36
17	BASELINE	23.07	23.94	24.85	25.59	26.36
18	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
19	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0
20						
21	FOREIGN SUBCOMPACT					
22	WITH TAX ONLY	24.46	25.20	25.72	26.46	26.99
23	BASELINE	24.46	25.20	25.72	26.46	26.99
24	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
25	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0
26						
27	DOMESTIC COMPACT					
28	WITH TAX ONLY	18.65	19.42	20.22	21.04	21.76
29	BASELINE	18.65	19.42	20.22	21.04	21.76
30	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
31	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0
32						
33	FOREIGN COMPACT					
34	WITH TAX ONLY	21.83	22.48	23.15	23.83	24.53
35	BASELINE	21.83	22.48	23.15	23.83	24.53
36	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
37	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0
38						
39	DOMESTIC LUXURY					
40	WITH TAX ONLY	14.15	14.79	15.45	16.15	16.80
41	BASELINE	14.15	14.79	15.45	16.15	16.80
42	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
43	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0
44						
45	FOREIGN LUXURY					
46	WITH TAX ONLY	17.88	18.28	18.76	19.11	19.60
47	BASELINE	17.88	18.28	18.76	19.11	19.60
48	DIFFERENCE	0.0	0.0	0.0	0.0	0.0
49	% DIFFERENCE	0.0	0.0	0.0	0.0	0.0

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX ONLY POLICY

TABLE 3,12 DOMESTIC AND FOREIGN AUTO PRICES

LINE	I T E M		1975	1976	1977	1978	1979	1980
1	TOTAL DOMESTIC AUTO PRICES							
2								
3	SUBCOMPACT	DOLLARS						
4	WITH TAX ONLY		3747,	3933,	4259,	4554,	4828,	5090,
5	BASELINE		3747,	3933,	4259,	4554,	4828,	5090,
6	DIFFERENCE		0,	0,	0,	0,	0,	0,
7	% DIFFERENCE		0,0	0,0	0,0	0,0	0,0	0,0
8								
9	COMPACT	DOLLARS						
10	WITH TAX ONLY		4284,	4485,	4840,	5161,	5477,	5789,
11	BASELINE		4284,	4485,	4840,	5161,	5477,	5789,
12	DIFFERENCE		0,	0,	0,	0,	0,	0,
13	% DIFFERENCE		0,0	0,0	0,0	0,0	0,0	0,0
14								
15	MID-SIZE	DOLLARS						
16	WITH TAX ONLY		5171,	5416,	5840,	6225,	6599,	6970,
17	BASELINE		5171,	5416,	5840,	6225,	6599,	6970,
18	DIFFERENCE		0,	0,	0,	0,	0,	0,
19	% DIFFERENCE		0,0	0,0	0,0	0,0	0,0	0,0
20								
21	FULL SIZE	DOLLARS						
22	WITH TAX ONLY		5867,	6143,	6620,	7175,	7594,	8008,
23	BASELINE		5867,	6143,	6620,	7057,	7477,	7891,
24	DIFFERENCE		0,	0,	0,	117,	116,	117,
25	% DIFFERENCE		0,0	0,0	0,0	1,66	1,56	1,48
26								
27	LUXURY	DOLLARS						
28	WITH TAX ONLY		9023,	9443,	10174,	10953,	11654,	12261,
29	BASELINE		9023,	9443,	10174,	10836,	11469,	12076,
30	DIFFERENCE		0,	0,	0,	117,	185,	185,
31	% DIFFERENCE		0,0	0,0	0,0	1,08	1,61	1,53
32								
33	TOTAL FOREIGN AUTO PRICES							
34								
35	SUBCOMPACT	DOLLARS						
36	WITH TAX ONLY		3907,	4222,	4402,	4629,	4869,	5135,
37	BASELINE		3907,	4222,	4402,	4629,	4869,	5135,
38	DIFFERENCE		0,	0,	0,	0,	0,	0,
39	% DIFFERENCE		0,0	0,0	0,0	0,0	0,0	0,0
40								
41	COMPACT	DOLLARS						
42	WITH TAX ONLY		6435,	7052,	7385,	7820,	8313,	8875,
43	BASELINE		6435,	7052,	7385,	7820,	8313,	8875,
44	DIFFERENCE		0,	0,	0,	0,	0,	0,
45	% DIFFERENCE		0,0	0,0	0,0	0,0	0,0	0,0
46								
47	LUXURY	DOLLARS						
48	WITH TAX ONLY		12692,	14143,	14911,	15886,	17093,	18416,
49	BASELINE		12692,	14143,	14911,	15936,	17093,	18416,
50	DIFFERENCE		0,	0,	0,	-49,	0,	0,
51	% DIFFERENCE		0,0	0,0	0,0	-0,31	0,0	0,0

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX ONLY POLICY

TABLE 3,12 DOMESTIC AND FOREIGN AUTO PRICES

LINE	ITEM		1981	1982	1983	1984	1985
1	TOTAL DOMESTIC AUTO PRICES:						
2							
3	SUBCOMPACT	DOLLARS					
4	WITH TAX ONLY		5302,	5529,	5788,	5991,	6244,
5	BASELINE		5302,	5529,	5788,	5991,	6244,
6	DIFFERENCE		0,	0,	0,	0,	0,
7	% DIFFERENCE		0,0	0,0	0,0	0,0	0,0
8							
9	COMPACT	DOLLARS					
10	WITH TAX ONLY		6045,	6318,	6579,	6878,	7186,
11	BASELINE		6045,	6318,	6579,	6878,	7186,
12	DIFFERENCE		0,	0,	0,	0,	0,
13	% DIFFERENCE		0,0	0,0	0,0	0,0	0,0
14							
15	MID-SIZE	DOLLARS					
16	WITH TAX ONLY		7327,	7653,	8020,	8370,	8807,
17	BASELINE		7273,	7593,	7895,	8234,	8576,
18	DIFFERENCE		55,	60,	125,	136,	231,
19	% DIFFERENCE		0,75	0,79	1,59	1,65	2,69
20							
21	FULL SIZE	DOLLARS					
22	WITH TAX ONLY		8410,	8781,	9189,	9676,	10078,
23	BASELINE		8227,	8582,	8913,	9286,	9659,
24	DIFFERENCE		183,	199,	276,	391,	419,
25	% DIFFERENCE		2,22	2,32	3,09	4,21	4,33
26							
27	LUXURY	DOLLARS					
28	WITH TAX ONLY		12820,	13361,	13926,	14606,	15198,
29	BASELINE		12563,	13082,	13563,	14114,	14672,
30	DIFFERENCE		257,	280,	363,	492,	526,
31	% DIFFERENCE		2,05	2,14	2,68	3,49	3,59
32							
33	TOTAL FOREIGN AUTO PRICES:						
34							
35	SUBCOMPACT	DOLLARS					
36	WITH TAX ONLY		5409,	5684,	5964,	6246,	6532,
37	BASELINE		5409,	5684,	5964,	6246,	6532,
38	DIFFERENCE		0,	0,	0,	0,	0,
39	% DIFFERENCE		0,0	0,0	0,0	0,0	0,0
40							
41	COMPACT	DOLLARS					
42	WITH TAX ONLY		9461,	10058,	10660,	11273,	11902,
43	BASELINE		9461,	10058,	10660,	11273,	11902,
44	DIFFERENCE		0,	0,	0,	0,	0,
45	% DIFFERENCE		0,0	0,0	0,0	0,0	0,0
46							
47	LUXURY	DOLLARS					
48	WITH TAX ONLY		19866,	21367,	22900,	24483,	26026,
49	BASELINE		19812,	21241,	22702,	24185,	25706,
50	DIFFERENCE		55,	126,	198,	298,	321,
51	% DIFFERENCE		0,28	0,59	0,87	1,23	1,25

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 3.13 USED CAR MARKET

LINE	I T E M		1975	1976	1977	1978	1979	1980
1	AVERAGE WHOLESALE PRICE	DOLLARS						
2	WITH TAX ONLY		2008.71	2158.37	2282.85	2419.97	2614.35	2791.30
3	BASELINE		2008.71	2158.37	2282.85	2416.73	2602.18	2779.61
4	DIFFERENCE		0.0	0.0	0.0	3.24	12.17	11.69
5	% DIFFERENCE		0.0	0.0	0.0	0.13	0.47	0.42
6								
7								
8	PRICE OF 1 YR OLD CAR/NEW CAR							
9								
10	SUBCOMPACT	RATIO						
11	WITH TAX ONLY		0.873	0.860	0.798	0.789	0.806	0.805
12	BASELINE		0.873	0.860	0.798	0.787	0.804	0.804
13	DIFFERENCE		0.0	0.0	0.0	0.002	0.001	-0.001
14	% DIFFERENCE		0.0	0.0	0.0	0.20	0.14	-0.12
15								
16	COMPACT	RATIO						
17	WITH TAX ONLY		0.824	0.739	0.731	0.714	0.725	0.723
18	BASELINE		0.824	0.739	0.731	0.710	0.725	0.724
19	DIFFERENCE		0.0	0.0	0.0	0.004	0.001	-0.001
20	% DIFFERENCE		0.0	0.0	0.0	0.51	0.08	-0.13
21								
22	MID-SIZE	RATIO						
23	WITH TAX ONLY		0.636	0.704	0.635	0.646	0.647	0.650
24	BASELINE		0.636	0.704	0.635	0.642	0.648	0.651
25	DIFFERENCE		0.0	0.0	0.0	0.004	-0.000	-0.001
26	% DIFFERENCE		0.0	0.0	0.0	0.66	-0.06	-0.13
27								
28	FULL SIZE	RATIO						
29	WITH TAX ONLY		0.646	0.695	0.591	0.576	0.615	0.615
30	BASELINE		0.646	0.695	0.591	0.588	0.613	0.616
31	DIFFERENCE		0.0	0.0	0.0	-0.012	0.002	-0.001
32	% DIFFERENCE		0.0	0.0	0.0	-2.02	0.36	-0.09
33								
34	LUXURY	RATIO						
35	WITH TAX ONLY		0.715	0.743	0.689	0.684	0.699	0.700
36	BASELINE		0.715	0.743	0.689	0.687	0.700	0.700
37	DIFFERENCE		0.0	0.0	0.0	-0.003	-0.001	-0.000
38	% DIFFERENCE		0.0	0.0	0.0	-0.44	-0.21	-0.05
39								
40								
41	TOTAL USED CARS PURCHASED	MILL AUTOS						
42	WITH TAX ONLY		16.98	18.66	15.78	15.36	16.86	17.35
43	BASELINE		16.98	18.66	15.78	15.39	16.77	17.39
44	DIFFERENCE		0.0	0.0	0.0	-0.03	0.08	-0.04
45	% DIFFERENCE		0.0	0.0	0.0	-0.18	0.50	-0.25

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 5.13 USED CAR MARKET

LINE	ITEM		1981	1982	1983	1984	1985
1	AVERAGE WHOLESALE PRICE	DOLLARS					
2	WITH TAX ONLY		2950.39	3102.69	3247.52	3392.52	3558.77
3	BASELINE		2933.67	3076.41	3218.23	3343.24	3496.25
4	DIFFERENCE		16.72	26.28	33.29	49.28	62.54
5	% DIFFERENCE		0.57	0.85	1.04	1.47	1.79
6							
7							
8	PRICE OF 1 YR OLD CAR/NEW CAR						
9							
10	SUBCOMPACT	RATIO					
11	WITH TAX ONLY		0.799	0.799	0.797	0.783	0.770
12	BASELINE		0.798	0.798	0.797	0.782	0.769
13	DIFFERENCE		0.001	0.001	0.000	0.001	0.001
14	% DIFFERENCE		0.06	0.12	0.05	0.16	0.08
15							
16	COMPACT	RATIO					
17	WITH TAX ONLY		0.713	0.709	0.706	0.698	0.686
18	BASELINE		0.712	0.708	0.705	0.695	0.686
19	DIFFERENCE		0.001	0.001	0.001	0.002	0.000
20	% DIFFERENCE		0.19	0.08	0.18	0.33	0.04
21							
22	MID-SIZE	RATIO					
23	WITH TAX ONLY		0.651	0.651	0.650	0.650	0.640
24	BASELINE		0.653	0.651	0.652	0.647	0.645
25	DIFFERENCE		-0.002	-0.000	-0.002	0.002	-0.005
26	% DIFFERENCE		-0.30	-0.00	-0.32	0.34	-0.74
27							
28	FULL SIZE	RATIO					
29	WITH TAX ONLY		0.614	0.619	0.618	0.593	0.588
30	BASELINE		0.619	0.618	0.620	0.601	0.588
31	DIFFERENCE		-0.005	0.000	-0.006	-0.007	-0.000
32	% DIFFERENCE		-0.86	0.06	-0.91	-1.25	-0.05
33							
34	LUXURY	RATIO					
35	WITH TAX ONLY		0.700	0.701	0.700	0.689	0.685
36	BASELINE		0.701	0.701	0.702	0.692	0.685
37	DIFFERENCE		-0.002	0.000	-0.002	-0.002	0.000
38	% DIFFERENCE		-0.25	0.01	-0.28	-0.35	0.00
39							
40							
41	TOTAL USED CARS PURCHASED	MILL AUTOS					
42	WITH TAX ONLY		17.25	17.70	17.91	18.07	18.17
43	BASELINE		17.33	17.62	17.99	18.46	18.18
44	DIFFERENCE		-0.08	0.08	-0.08	0.01	-0.01
45	% DIFFERENCE		-0.46	0.46	-0.44	0.07	-0.08

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
REFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH, BASELINE VS TAX ONLY POLICY

TABLE 3.18 UNADJUSTED SHARES BY SIZE CLASS

LINE	ITEM	1975	1976	1977	1978	1979	1980
1	DESIRED SHARES IN STOCK						
2	BEFORE RECONCILING SUM TO 1.0						
3							
4	SUBCOMPACT & COMPACT						
5	WITH TAX ONLY	0.4210	0.4022	0.3940	0.3952	0.3970	0.4007
6	BASELINE	0.4210	0.4022	0.3940	0.3921	0.3937	0.3975
7	DIFFERENCE	0.0	0.0	0.0	0.0031	0.0034	0.0032
8	% DIFFERENCE	0.0	0.0	0.0	0.78	0.86	0.80
9							
10	MID-SIZE						
11	WITH TAX ONLY	0.2657	0.2691	0.2696	0.2709	0.2715	0.2721
12	BASELINE	0.2657	0.2691	0.2696	0.2709	0.2712	0.2719
13	DIFFERENCE	0.0	0.0	0.0	0.0001	0.0003	0.0002
14	% DIFFERENCE	0.0	0.0	0.0	0.05	0.11	0.09
15							
16	FULL SIZE						
17	WITH TAX ONLY	0.2253	0.2579	0.2728	0.2593	0.2619	0.2518
18	BASELINE	0.2253	0.2579	0.2728	0.2770	0.2775	0.2664
19	DIFFERENCE	0.0	0.0	0.0	-0.0177	-0.0156	-0.0146
20	% DIFFERENCE	0.0	0.0	0.0	-6.41	-5.64	-5.48
21							
22	LUXURY						
23	WITH TAX ONLY	0.0922	0.0923	0.0920	0.0917	0.0925	0.0937
24	BASELINE	0.0922	0.0923	0.0920	0.0920	0.0928	0.0941
25	DIFFERENCE	0.0	0.0	0.0	-0.0002	-0.0003	-0.0003
26	% DIFFERENCE	0.0	0.0	0.0	-0.24	-0.35	-0.33
27							
28	TOTAL						
29	WITH TAX ONLY	1.0041	1.0216	1.0283	1.0171	1.0229	1.0184
30	BASELINE	1.0041	1.0216	1.0283	1.0319	1.0352	1.0298
31	DIFFERENCE	0.0	0.0	0.0	-0.0148	-0.0123	-0.0115
32	% DIFFERENCE	0.0	0.0	0.0	-1.44	-1.19	-1.11

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX ONLY POLICY

TABLE 3,14 UNADJUSTED SHARES BY SIZE CLASS

LINE	ITEM	1981	1982	1983	1984	1985
1	DESIRED SHARES IN STOCK					
2	BEFORE RECONCILING SUM TO 1.0					
3						
4	SUBCOMPACT & COMPACT					
5	WITH TAX ONLY	0.4065	0.4090	0.4115	0.4101	0.4087
6	BASELINE	0.4009	0.4032	0.4031	0.3997	0.3966
7	DIFFERENCE	0.0056	0.0059	0.0084	0.0104	0.0120
8	% DIFFERENCE	1.40	1.45	2.08	2.60	3.03
9						
10	MID-SIZE					
11	WITH TAX ONLY	0.2722	0.2725	0.2728	0.2730	0.2723
12	BASELINE	0.2729	0.2732	0.2739	0.2745	0.2749
13	DIFFERENCE	-0.0007	-0.0007	-0.0010	-0.0015	-0.0026
14	% DIFFERENCE	-0.25	-0.25	-0.38	-0.56	-0.96
15						
16	FULL SIZE					
17	WITH TAX ONLY	0.2360	0.2315	0.2256	0.2188	0.2222
18	BASELINE	0.2555	0.2512	0.2502	0.2533	0.2545
19	DIFFERENCE	-0.0194	-0.0198	-0.0246	-0.0344	-0.0323
20	% DIFFERENCE	-7.60	-7.87	-9.83	-13.60	-12.70
21						
22	LUXURY					
23	WITH TAX ONLY	0.0950	0.0962	0.0978	0.0987	0.1006
24	BASELINE	0.0954	0.0966	0.0979	0.0994	0.1012
25	DIFFERENCE	-0.0004	-0.0004	-0.0005	-0.0007	-0.0006
26	% DIFFERENCE	-0.41	-0.43	-0.50	-0.67	-0.61
27						
28	TOTAL					
29	WITH TAX ONLY	1.0098	1.0093	1.0068	1.0007	1.0037
30	BASELINE	1.0246	1.0243	1.0251	1.0270	1.0272
31	DIFFERENCE	-0.0149	-0.0150	-0.0183	-0.0262	-0.0235
32	% DIFFERENCE	-1.45	-1.46	-1.78	-2.56	-2.29

A PRODUCT OF WHARTON EFA, INC.

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
WEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX ONLY POLICY

TABLE 3.15 UNADJUSTED SHARES BY SIZE CLASS - CONTINUED

LINE	I T E M	1975	1976	1977	1978	1979	1980
1	DESIRED SHARES IN NEW REGISTRATIONS						
2	BEFORE RECONCILING SUM TO 1.0						
3							
4	SUBCOMPACT & COMPACT						
5	WITH TAX ONLY	0.5093	0.4172	0.4122	0.4160	0.4109	0.4157
6	BASELINE	0.5093	0.4172	0.4122	0.4028	0.3995	0.4054
7	DIFFERENCE	0.0	0.0	0.0	0.0132	0.0115	0.0103
8	% DIFFERENCE	0.0	0.0	0.0	3.28	2.87	2.54
9							
10	MID-SIZE						
11	WITH TAX ONLY	0.2281	0.3008	0.2852	0.2894	0.2817	0.2805
12	BASELINE	0.2281	0.3008	0.2852	0.2810	0.2758	0.2753
13	DIFFERENCE	0.0	0.0	0.0	0.0084	0.0068	0.0052
14	% DIFFERENCE	0.0	0.0	0.0	2.98	2.31	1.89
15							
16	FULL SIZE						
17	WITH TAX ONLY	0.1686	0.1863	0.2252	0.2195	0.2323	0.2271
18	BASELINE	0.1686	0.1863	0.2252	0.2417	0.2511	0.2433
19	DIFFERENCE	0.0	0.0	0.0	-0.0222	-0.0187	-0.0162
20	% DIFFERENCE	0.0	0.0	0.0	-9.20	-7.47	-6.66
21							
22	LUXURY						
23	WITH TAX ONLY	0.0941	0.0958	0.0940	0.0930	0.0939	0.0956
24	BASELINE	0.0941	0.0958	0.0940	0.0934	0.0944	0.0961
25	DIFFERENCE	0.0	0.0	0.0	-0.0004	-0.0005	-0.0005
26	% DIFFERENCE	0.0	0.0	0.0	-0.41	-0.56	-0.50
27							
28	TOTAL						
29	WITH TAX ONLY	1.0001	1.0001	1.0166	1.0178	1.0189	1.0189
30	BASELINE	1.0001	1.0001	1.0166	1.0188	1.0203	1.0201
31	DIFFERENCE	0.0	0.0	0.0	-0.0010	-0.0015	-0.0012
32	% DIFFERENCE	0.0	0.0	0.0	-0.10	-0.14	-0.12

ILLUSTRATIVE ALTERNATE SIMULATION OF THE
MEFA LONG RUN AUTO MODEL 1975-1985
ITC 10% GAS PRICE GROWTH,BASELINE VS TAX ONLY POLICY

TABLE 3.15 UNADJUSTED SHARES BY SIZE CLASS - CONTINUED

LINE	ITEM	1981	1982	1983	1984	1985
1	DESIRED SHARES IN NEW REGISTRATIONS					
2	BEFORE RECONCILING SUM TO 1.0					
3						
4	SUBCOMPACT & COMPACT					
5	WITH TAX ONLY	0.4268	0.4283	0.4317	0.4325	0.4276
6	BASELINE	0.4111	0.4130	0.4113	0.4051	0.4010
7	DIFFERENCE	0.0156	0.0154	0.0204	0.0274	0.0266
8	% DIFFERENCE	3.80	3.72	4.96	6.76	6.64
9						
10	MID-SIZE					
11	WITH TAX ONLY	0.2807	0.2769	0.2744	0.2767	0.2718
12	BASELINE	0.2758	0.2725	0.2703	0.2683	0.2678
13	DIFFERENCE	0.0049	0.0044	0.0042	0.0084	0.0040
14	% DIFFERENCE	1.76	1.62	1.54	3.13	1.49
15						
16	FULL SIZE					
17	WITH TAX ONLY	0.2129	0.2135	0.2108	0.2065	0.2153
18	BASELINE	0.2348	0.2346	0.2374	0.2453	0.2483
19	DIFFERENCE	-0.0220	-0.0211	-0.0267	-0.0387	-0.0331
20	% DIFFERENCE	-9.36	-8.99	-11.23	-15.79	-13.32
21						
22	LUXURY					
23	WITH TAX ONLY	0.0973	0.0990	0.1005	0.1022	0.1047
24	BASELINE	0.0979	0.0996	0.1012	0.1032	0.1055
25	DIFFERENCE	-0.0006	-0.0006	-0.0007	-0.0010	-0.0009
26	% DIFFERENCE	-0.60	-0.60	-0.69	-0.95	-0.81
27						
28	TOTAL					
29	WITH TAX ONLY	1.0176	1.0177	1.0175	1.0180	1.0193
30	BASELINE	1.0197	1.0196	1.0203	1.0219	1.0226
31	DIFFERENCE	-0.0021	-0.0019	-0.0028	-0.0039	-0.0033
32	% DIFFERENCE	-0.20	-0.18	-0.27	-0.38	-0.32

A PRODUCT OF WHARTON EFA, INC.