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BY THE COMPTROLLER GENERAL

**Report To  
Senator John W. Warner**

OF THE UNITED STATES

**Effects In Washington, D.C., Area Of  
1979 Gasoline Shortage: Supplies Less  
Than National Average; Price Increases  
Comparable**

During May and June 1979 the Washington, D. C., metropolitan area received, respectively, 6 and 10 percent less gasoline than the national average. Although the price of gasoline in the Washington, D. C., area increased significantly during the first 7 months of 1979, it was comparable with the national average.

The Department of Energy has not developed overall criteria and guidelines to determine when an area has a gasoline supply imbalance which requires the shifting of supplies from other areas. Also, the Department does not know whether the gasoline tilt rule--which gives refiners increased flexibility to allocate additional costs to gasoline--is accomplishing its objectives. The Department, therefore, should develop the necessary criteria and guidelines for responding to gasoline supply imbalances and should determine exactly how the gasoline tilt rule has been working and whether revisions are needed.



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COMPTROLLER GENERAL OF THE UNITED STATES

WASHINGTON, D.C. 20548

B-197378

The Honorable John W. Warner  
United States Senate

Dear Senator Warner:

As requested in your June 28, 1979, letter this report discusses the supply and price of gasoline in the Washington, D.C., metropolitan area during the 1979 gasoline shortage. It also discusses the Department of Energy's lack of criteria and guidelines to determine when an area has a gasoline supply imbalance which requires the shifting of supplies from other areas, and the fact that the Department does not know whether the gasoline tilt rule (that which gives refiners increased flexibility to allocate additional costs to gasoline) is accomplishing its objectives.

As arranged with your office, we plan to distribute copies of this report to interested parties and make other copies available upon request.

Sincerely yours,

A handwritten signature in cursive script that reads "Milton J. Fowler".

Acting Comptroller General  
of the United States



D I G E S T

During the 1979 gasoline shortage, Washington, D.C., metropolitan area motorists as well as motorists in other areas had to sit in line at service stations and were forced to change their driving habits. Other locations across the Nation, however, had less severe gasoline supply problems. This prompted questions and concerns.

Senator John W. Warner asked GAO to determine the causes of the local gasoline shortage, the levels in the marketing system where price increases occurred, and the effectiveness of the Department of Energy's response to the situation.

GAO reviewed information at the Department of Energy and other sources and obtained data directly from 13 oil companies. These 13 companies collectively account for 77 percent of the gasoline supplied to the entire States of Virginia and Maryland and to the District of Columbia. GAO visited four of these companies for more detailed analyses and randomly selected a number of each company's customers (wholesalers and retailers) in the Washington, D.C., area for followup work. GAO contacted 32 retail stations and 6 wholesalers directly supplied by the 4 companies, and 17 retail stations supplied by the 6 wholesalers. The gasoline supply and price data in this report is based on information obtained from all 13 companies.

A complementary report entitled "Gasoline Allocation: A Chaotic Program In Need of Overhaul," EMD-80-34, issued on April 23, 1980, dealt with the national gasoline

supply allocation program. It made a number of specific recommendations to the Secretary of Energy on improving the overall allocation program which would also be applicable to the Washington metropolitan area. Actions the Secretary may take on these recommendations will affect this geographic area. In addition, this report makes several other recommendations.

WASHINGTON, D.C., AREA  
GASOLINE SUPPLIES BELOW  
THE NATIONAL AVERAGE

During the first 7 months of 1979 the Washington, D.C., area received proportionately less gasoline than the Nation as a whole. At the height of the area's gasoline shortage, in May and June 1979, the 13 major gasoline suppliers delivered to the area 93 and 85 percent, respectively, of the gasoline they delivered a year earlier. Nationwide these percentages for all suppliers were 99 and 95 percent. Therefore, the Washington, D.C., area received 6 percent less in May 1979 and 10 percent less in June 1979 than the national average. This means that if the 13 suppliers had been able to supply the local area at percentages comparable to the national average, the Washington, D.C., vicinity would have received 339 thousand gallons more gasoline a day during June 1979. Actual deliveries totaled 2,884 thousand gallons a day during that month. (See pp. 8-10.)

The principal reason for this difference was that the Washington, D.C., area suppliers had less gasoline available for delivery than the national average for all suppliers.

GAO also compared the 13 oil companies' Washington, D.C., area gasoline supply percentage with the companies' national percentages. This comparison showed that in 8 of the 13 cases the Washington, D.C., area figures for May and June 1979 were lower than the nationwide figures. The 13 companies' average nationwide supply percentages were 95 and 88 percent for May and June

1979, whereas their average Washington, D.C., area supply percentages were 93 and 85 percent, respectively. Oil company officials provided the following reasons for these differences:

--Changes in a company's market share from one year to the next. For example, a loss of retail outlets in the vicinity of Washington, D.C., would reduce both the amount of gasoline delivered and the percentage of prior year's supplies delivered.

--Lack of significant numbers of priority users in the Washington, D.C., area. The oil companies shift gasoline supplies to meet priority requirements; therefore these shiftings reduce the amount available for the national capital area.

--Urban areas receive proportionately less supply since they are faster growing and the Department of Energy's gasoline allocation regulations do not provide for timely adjustments to keep abreast of shifts in population and economic activity. (See pp. 10-12.)

The Washington, D.C., area suburbs did not always receive a proportionate amount of State set-aside supplies. These supplies are permitted by the Department of Energy's gasoline allocation regulations, which allow each State and the District of Columbia to direct the distribution of 5 percent of the gasoline supplied them, in order to meet hardship and emergency requirements. The Virginia suburbs of Washington, D.C., received only 7.5 percent of that State's set-aside in May 1979, although they account for about 22 percent of the State's registered motor vehicles. However, during June through August 1979 they did receive increased percentages comparable to their percentage of registered motor vehicles. The Maryland suburbs of Washington, D.C., received only 11 percent of that State's set-aside in May and 17.6 percent in June 1979, even though they account for 33 percent of the State's registered motor

vehicles. Similar to the Virginia suburbs, however, these Maryland counties did receive increased percentages during July and August 1979. (See pp. 13-17.)

The Department of Energy and the oil companies have the authority to transfer specific amounts of gasoline from one area to another to correct regional supply imbalances. Neither of these entities exercised this authority to address the Washington, D.C., area shortage. The Department has not developed overall criteria and guidelines to determine when an area has a supply imbalance which requires the expeditious use of the Department's authority. Also, GAO could find only one instance where the Department of Energy has used this authority. (See pp. 12-13.)

REASONS FOR PRICE INCREASES  
IN WASHINGTON, D.C., AREA

The principal cause of increased retail gasoline prices in the Washington, D.C., area during March through July 1979 was refiners' prices. The four refiners GAO reviewed in detail raised their prices for leaded regular gasoline an average of 15.7 cents a gallon (32 percent). Most of this increase can be attributed to the four companies' cost of crude oil, which went up an average of 12.6 cents a gallon during this period. Thus, the refiners' average gross margin (selling price less crude oil costs) increased 3.1 cents a gallon (17 percent), from 18 cents to 21.1 cents a gallon. This margin would have been available to pay other increased costs and any amount remaining after deducting such increases would reflect increased net profits. Both wholesalers and retail stations supplied directly by these refiners also increased their margins (selling price less purchase cost of gasoline) during this period. The average increase in margins among retailers was 3.3 cents a gallon (32 percent) for leaded regular gasoline. Among the six wholesalers GAO reviewed, the increase was



an average of 2.7 cents a gallon (48 percent). (See pp. 23-26.)

Despite these increases at all three levels of the gasoline marketing chain, average prices of gasoline in the Washington, D.C., area during July 1979 were less than the national average price.

GASOLINE TILT RULE MAY NOT BE  
ACCOMPLISHING ITS OBJECTIVES

It appears that some of the costs which were allowed to be passed through by the Department of Energy's gasoline tilt rule which affected the whole nation, including the Washington, D.C., area, were instead put in the refiners' cost banks (allowable costs which have not yet been passed on to customers and which can be recovered as part of future sales). 1/ This raises questions as to whether the objectives of the tilt rule are being met.

The Nation's 29 largest refiners' banked gasoline costs increased from \$836 million in January to \$3.7 billion in December 1979. 2/ This increase was not only large, but also occurred during the time of year when these banks are usually reduced. This banking activity reveals that had they chosen to, refiners could have raised prices even higher than they did and still have been in compliance with the Department's regulations. (See p. 27.)

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1/This gives refiners increased flexibility to allocate costs to gasoline and to take the pressure off heating oil prices by allowing costs to be transferred to gasoline. Although the tilt rule permits additional costs to be allocated to gasoline, it generally does not require a proportionate reduction in the costs allocated to the other petroleum products produced from a barrel of crude oil.

2/DOE estimated these banked costs reached \$5.3 billion by Feb. 1980.

This significant increase in gasoline cost banks was apparently due to the combined effects of the Department of Energy's amended procedures for refiling cost reports, the gasoline tilt rule, the Council on Wage and Price Stability's guidelines, and/or the economic conditions of the marketplace. The Department issued its revised procedures for filing amended cost allocation reports on March 13, 1979. These procedures set a deadline of June 1, 1979, for the filing of amended reports for any month from September 1973 through May 1978. According to a Department official, this prompted refiners to review their cost records and to file amended cost reports to insure they claimed all allowable costs. These costs were credited to their cost banks. (See pp. 27-28.)

The Council on Wage and Price Stability monitors the economy, with emphasis on wages, costs, productivity, profits, and prices. Its guidelines set voluntary limitations on the total price increase for all of a company's product lines. As such, they limit a refiner's total profit from refining a barrel of crude oil. They do not recognize the Department's tilt rule and require that any increased cost allocated to one product be offset by a proportionate reduction in the costs allocated to the other products. Officials of the Council and two of the oil companies GAO visited said that the Council's guidelines restrained gasoline prices and consequently caused the gasoline cost banks to increase. (See p. 29.)

GAO did not analyze the situation to determine whether this happened. While this is a possible explanation, it is also possible that the tilt rule permits more costs to be allocated to gasoline than market conditions permit and that refiners, therefore, cannot pass through all of the allowable costs. In both cases costs would have been banked rather than passed through, and it appears that the objectives of the tilt rule were not being met since costs originally intended by the Department to be recovered and reinvested in refining capacity were instead banked. Also, since the price of

heating oil went up significantly during 1979, it is unclear regarding the extent to which the tilt rule eased the pressure on heating oil prices. (See p. 29.)

FEDERAL MONITORING OF  
WASHINGTON, D.C., AREA  
GASOLINE SITUATION

In addition to auditing Washington, D.C., area retail gasoline stations, the Department of Energy reviewed aspects of the area's gasoline supply situation. During the period February 15 through August 17, 1979, the Department audited 360 gasoline retailers in the Washington, D.C., vicinity and found 26 percent of these to be in violation of the Department's regulations. Price overcharges were as high as 12 cents a gallon. (See p. 33.)

In response to concern about the amount of gasoline stored at local terminals, the Department made a review and found no evidence that gasoline inventories were being withheld at the major refiners' terminals in the Washington, D.C., area (all located in Northern Virginia). In fact, month-end inventories had actually decreased over levels at the terminals during 1978. The Department also found that overall gasoline supplies available in the area during May through July 1979 were apparently 10 to 12 percent less than a year earlier. (See p. 35.)

In July 1979 the city of Washington, D.C., expressed the belief that the District had not been receiving sufficient gasoline supplies. After comparing Washington, D.C., with five other cities and after receiving actual data for July, the Department concluded that the District had been unfairly burdened. During June and July 1979 the District had only received 88 and 83 percent, respectively, of the prior year's volumes, whereas gasoline supplied nationwide was 95 and 92 percent, respectively, of 1978 volumes. (See p. 36.)

RECOMMENDATIONS TO  
THE SECRETARY OF ENERGY

GAO recommends that the Secretary of Energy establish appropriate criteria and guidelines so that the Department of Energy can expeditiously use its discretionary authority to direct companies to shift supplies to areas where supply imbalances occur in future shortage situations. In using this discretionary authority, the Department should, through its monitoring efforts, use its information and work with State and local government agencies to identify areas experiencing supply imbalances. In view of the information GAO obtained about the gasoline tilt rule, the Secretary of Energy should determine exactly how this rule has been working, with specific emphasis on the rule's stated objectives. These are to improve the investment climate for expansion or modification of refineries by giving refiners increased flexibility in allocating costs and to take the pressure off heating oil prices. Also, the Secretary should determine whether the tilt rule has caused the significant increase in gasoline cost banks, and, if so, whether revisions to the tilt rule are needed. (See pp. 39-40.)

AGENCY COMMENTS

Although the Department of Energy agreed with many of GAO's conclusions, they disagreed with certain aspects of the report which they thought should be further clarified. (See app. III.) The aspects the Department addressed were

- the implication that the Washington, D.C., area shortage was unique,
- the lack of a more balanced evaluation of the gasoline allocation program,
- the timing and difficulty in analyzing the effects of the gasoline tilt rule, and
- the responsibilities and procedures of the Department's Office of Enforcement.

GAO's evaluation of the Department's comments begins on page 40.

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ABBREVIATIONS

DOE	Department of Energy
ERA	Economic Regulatory Administration
GAO	General Accounting Office
OHA	Office of Hearings and Appeals

## CHAPTER 1

### INTRODUCTION

The American public relies heavily on the automobile for both day-to-day and recreational activities. Anything which disturbs this relationship becomes a public issue. A vivid example was the Washington, D.C., metropolitan area's shortfall in gasoline supplies during the spring and summer of 1979. <sup>1/</sup> Local motorists and travelers to the area had to sit in line at service stations and were forced to change their driving habits to accommodate not only these lines, but also the stations' shorter operating hours and minimum and maximum purchase restrictions.

Other locations across the Nation, however, did not experience the same gasoline supply problems, and therefore had little or no trouble purchasing gasoline. As a result, residents of those areas experiencing a gasoline shortfall began to wonder why the other areas were not being affected. People blamed the crude oil producing countries, the oil companies, wholesalers, retailers, and the Department of Energy (DOE).

On June 28, 1979, Senator John W. Warner requested that we determine

- the reasons why the gasoline shortage showed up so dramatically in the Washington, D.C., area,
- the levels in the marketing system where price increases occurred, and
- the effectiveness of DOE in responding to the shortage and rising prices. (See app. I.)

Additionally, he requested similar information on the price and availability of home heating oil for the area during the past winter, which we presented in our report to him entitled "Washington, D.C., Area Home Heating Oil Supplies Adequate But At Escalating Prices" (EMD-80-42, Jan. 22, 1980).

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<sup>1/</sup>For purposes of this report, the Washington, D.C., metropolitan area is defined as Washington, D.C., the Maryland counties of Charles, Montgomery and Prince George's; the Virginia cities of Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park, and the counties of Arlington, Fairfax, Loudoun, and Prince William.

## SCOPE OF REVIEW

As part of our analysis we obtained information from the 14 oil companies who are the largest suppliers of gasoline to the Washington, D.C., area. (See app. II.) This data included total monthly supplies, by grade of gasoline, to the Washington, D.C., area from January 1978 through July 1979 and information on how the gasoline was distributed throughout the area--that is, how much gasoline was sold through wholesalers or directly to retailers, and how much was handled by company-owned-and-operated retail outlets as opposed to independent retailers. We also requested data on selling prices.

One of the companies was not able to provide the information on a monthly basis as requested. Therefore, our analysis of the Washington, D.C., area gasoline market is based on data from 13 oil companies, which collectively account for about 77 percent of the gasoline supplied to the entire States of Virginia and Maryland and the District of Columbia.

From these 13 companies, we selected four--Exxon, Shell, Phillips, and Amoco (Standard of Indiana)--for more detailed analyses. These companies were chosen on the basis of their market shares and method of product distribution in the Washington, D.C., area. During visits to these companies, we discussed their operations in the District of Columbia vicinity and selected a number of each company's customers in this area--geographically representative wholesalers and retailers--for followup work. We also obtained the wholesalers' and retailers' selling prices to determine the amount of price increase at each level in the marketing chain. Our detailed price review covered the period March through July 1979.

We met with officials from the Virginia, Maryland, and District of Columbia energy offices. We discussed their procedures for using gasoline reserved for the State set-aside program, 1/ and obtained information on the amounts directed to the Washington, D.C., area.

We discussed the District of Columbia area shortage with several professional and trade associations representing various aspects of the petroleum industry.

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1/Program which makes gasoline available to the States to alleviate temporary shortages. See p. 6.



We also performed work at DOE's Economic Regulatory Administration (ERA). We met with cognizant agency officials and reviewed ERA's gasoline regulations. In addition, as part of a separate assignment, we evaluated DOE's gasoline allocation system. 1/

#### REVIEW LIMITATIONS

The oil companies were cooperative in providing the requested data. However, only 4 of the 13 companies provided information on amounts reserved for either State set-aside or priority users. 2/ The companies said that they do not compile such data on so limited a geographic area, and that doing so would result in a substantial investment of staff resources. Therefore, while we could determine the total gasoline these companies supplied to the area, we were unable to identify those amounts available to the ordinary motorist. Additionally, in tracing the price increases during the March through July 1979 period, 15 of the 49 retailers we visited did not provide requested data because their records did not contain it.

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1/"Gasoline Allocation: A Chaotic Program in Need of Overhaul," EMD-80-34, Apr. 23, 1980.

2/Gasoline users which receive priority in the allocation of available supplies. See p. 5.

## CHAPTER 2

### WASHINGTON, D.C., AREA GASOLINE

#### SUPPLY--LESS THAN NATIONAL AVERAGE

During the Washington, D.C., area's gasoline shortage in the spring and summer of 1979, area residents questioned why they were experiencing waiting lines at service stations, while other parts of the country had none. Our review revealed that at the height of the area's gasoline shortage during May and June 1979, the 13 major suppliers for the area delivered 93 and 85 percent, respectively, of the gasoline they delivered a year earlier. Nationwide these average percentages for all suppliers were 99 and 95 percent. Therefore the Washington, D.C., area received 6 percent less in May 1979 and 10 percent less in June 1979 than the national average. The principal reason for this difference was this area's mix of suppliers. That is, the suppliers serving the Washington, D.C., area had a lower percentage of gasoline available for delivery than the national average for all suppliers.

#### GASOLINE ALLOCATION SYSTEM

In response to the U.S. shortage of petroleum supplies resulting from the Arab oil embargo, the Congress enacted the Emergency Petroleum Allocation Act in November 1973. The regulations issued pursuant to this law established a detailed framework for determining maximum prices and mandated allocation of crude oil and refined petroleum products at all levels of the petroleum industry. The purpose of these regulations, known as the Mandatory Petroleum Price and Allocation Regulations, was to preserve an economically stable and competitive industry and to insure the equitable distribution of petroleum products at equitable prices in view of the supply shortage.

DOE's motor gasoline allocation regulations affect the entire distribution system, from the refiner through the middleman, also known as the jobber or wholesaler, to the retailer. In order to protect purchasers' access to gasoline supplies, these regulations provide that supplier/purchaser relationships in a preestablished base period will be maintained. Suppliers must sell to the same purchasers who bought from them during the base period, but purchasers are not obligated to buy the volumes offered them. The amounts purchased during the base period, that is, base period volumes, are used to determine the quantity of products to which purchasers are entitled during a shortage. The sellers are required to treat each customer equitably,

that is, each customer is entitled to the same percentage of its base period volume. This percentage is known as the allocation fraction, and suppliers generally have to maintain the same fraction nationwide. Contrary to popular belief, this fraction is not based on the total amount of gasoline a seller expects to have available. Rather, the seller deducts State set-aside and priority use volumes from his total available supplies in arriving at his allocation fraction. (State set-aside and priority use are explained in the following paragraphs.)

Originally the base period for any given month was the corresponding month in calendar year 1972. This year was selected because it was thought to be the most recent year properly mirroring free market conditions. Subsequently, the base period has been changed several times. Since May 1, 1979, it has been the month during the period November 1977 through October 1978 which corresponds to the current calendar month. The one exception to this procedure is when a wholesaler or retailer during October 1978 through February 1979 purchased an average of at least 10 percent more gasoline than he purchased during the applicable base period month. In such an instance he is permitted to use this increased amount as the basis for his allocation.

The objectives of the regulations are to protect as much as possible public health, safety, and welfare and the national defense and maintain public services and agricultural operations. There were initially two categories of priority users. National defense and agricultural producers made up the first category and were entitled at all times to 100 percent of their requirements at any given time. The second category of priority users included those listed below, which were allocated a portion of their current requirements.

- Emergency services.
- Energy production.
- Sanitation services.
- Telecommunications.
- Passenger transportation.
- Cargo, freight, and mail hauling by truck.
- Aviation ground support vehicles and equipment.

Effective August 1, 1979, DOE merged these two categories of priority users into one category whose members are now restricted to 100 percent of their base period purchases.

The regulations also provide for a State set-aside program which permits each State and the District of Columbia to direct the distribution of 5 percent of the motor gasoline supplied in order to meet hardship and emergency requirements. (Prior to June 1, 1979, the amount was 3 percent.) If the State does not utilize all of the allotted set-aside volumes during the month, the remaining supplies are distributed by the original suppliers.

The regulations permit some flexibility in the distribution process. Companies having difficulty in maintaining the required uniform allocation fraction are permitted to make certain temporary adjustments. Similarly, users who experience unusual growth may have their base period volume adjusted, or may have cases involving gross inequity or serious hardships adjudicated by DOE's Office of Hearings and Appeals (OHA).

#### GASOLINE DISTRIBUTION SYSTEM

Although most gasoline moves from the refinery through a nationwide pipeline network, it also moves by tanker and barge. The gasoline arrives at terminal facilities where it is stored for eventual distribution to either wholesalers or retailers.

Most of the gasoline marketed in the Washington, D.C., area is transported through two pipelines, the Colonial Pipeline which services the Fairfax City, Virginia, and Manassas, Virginia, terminals and the Plantation Pipe Line which serves the Newington, Virginia, terminal. (A small amount is trucked in from Philadelphia and Baltimore.) These pipelines are classified as common carriers, whose rates are regulated by the Federal Energy Regulatory Commission.

The Colonial Pipeline originates in the Houston, Texas, area and terminates in New York City. It is owned by 10 major refiners, either directly or through subsidiary companies, and handles more than four times the volume of the Plantation Pipe Line. The Plantation Pipe Line originates in the Baton Rouge, Louisiana, area, terminates in the Washington, D.C., area, and is owned by three major refiners or their subsidiary companies. The pipelines operate continuously and ship various refined products in distinct batches. According to DOE statistics, these two pipelines deliver an average of about 3.36 million gallons a day of gasoline to the Washington, D.C., area. The product is delivered to terminals along the pipeline, which

may be tank farms, terminals owned by commercial firms, or holding areas owned by the pipeline companies. From there the products are eventually distributed to the owners of record.

In the Washington, D.C., area the refiners supply about 92 percent of their branded retail stations directly from their terminals. The refiners own the gasoline at the terminals and use their own trucks to haul the gasoline to the retail stations. The other 8 percent of gasoline in the Washington, D.C., area is sold to wholesalers. This is significantly below the national average of 49 percent. The principal reason for the relatively small number of wholesalers in the vicinity of the District of Columbia area is that they primarily serve rural areas, as opposed to urban areas. The wholesalers, also referred to as jobbers, purchase and take title to the gasoline and offer it for resale. They generally own bulk plants for storing the gasoline and transportation equipment to move the product from the terminal to their bulk plants, and from there to their customers.

There are several types of retail gasoline service stations. Nationwide about 80 percent are operated by independent business persons, while the other 20 percent are operated by oil companies. The majority of the retail stations are lessee stations owned by the supplier but leased to and operated by independent business persons, who sell gasoline under the supplier's brand name. Suppliers also own and operate retail stations. Contract dealers own their stations and sell a supplier's gasoline under its brand name. Independent or private brand retailers own and operate their stations under their own private brand names.

Most of the Washington, D.C., area stations are independently operated. For those four companies for which we did followup work, only 21 of 682 directly supplied stations are company owned and operated. Also, Maryland's divestiture law does not permit oil companies to own and operate retail service stations.

In our discussions with officials of the four oil companies and retail station operators, we found that the oil companies did not dictate stations' hours. Operators decided what their hours would be. Some of the oil companies did suggest to their retailers that it would be good business practice to sell gasoline for a few hours every day.

GASOLINE SUPPLIED TO  
WASHINGTON, D.C., AREA

During the first 7 months of 1979 the Washington, D.C., area received proportionately less gasoline than the Nation as a whole. We compared the 13 oil companies' supply percentages for the Washington, D.C., area with their nationwide supply percentage, and with the average nationwide supply percentage provided by all companies. We found that during May and June 1979 the 13 oil companies supplied the Washington, D.C., area a smaller percentage of gasoline than the percentage they supplied nationwide, and also smaller than the average national percentage for all companies.

We obtained our Washington, D.C., area supply data from the oil companies because DOE does not collect supply data on a metropolitan area basis. DOE collects data on a state-by-state basis. Each prime supplier--the refiner or wholesaler who transports gasoline into a State for consumption there--forecasts the amounts available for use in that State each month.

The following table shows not only how the Washington, D.C., area's gasoline supplies decreased from January to July 1979, but also how these supplies compared to nationwide supplies. (It should be noted that the percentages shown in the table relate to total supply and are not allocation percentages. We did not use allocation percentages since they are not a good indicator of the total amount of gasoline being supplied. At most, they reflect only the percent of gasoline supplies the companies have available for their customers after deducting amounts for State set-aside and priority uses.)

Comparison of Gasoline Supplied  
to Washington, D.C., Area by 13 Oil  
Companies With National Supply Percentages

	<u>Supplies to Washington, D.C., area by 13 oil companies</u>		<u>Nationwide supplies (note a)</u>		<u>Washington, D.C., area shortfall (thousands of gallons a day)</u>
	<u>Quantity (thousands of gallons a day)</u>	<u>Percent of previous year</u>	<u>Percent of previous year</u>	<u>Compared to Washington, D.C., area supplies</u>	
<u>1979</u>			<u>(Percent)</u>		
Jan.	3,167	109	112	+ 3	87
Feb.	2,997	b/97	110	+13	b/402
Mar.	3,256	101	105	+ 4	129
Apr.	3,179	99	102	+ 3	97
May	3,095	93	99	+ 6	200
June	2,884	85	95	+10	339
July	2,888	91	92	+ 1	32

a/Gasoline supplied to all of the United States by all suppliers.

b/This reduction was not the result of a gasoline shortage. Rather the winter weather in the Washington, D.C., area apparently contributed to reduced gasoline consumption.

Source: GAO tabulation from DOE and 13 oil companies unpublished data.

As shown in the table, the supplies of gasoline to the Washington, D.C., area steadily declined from March through June before improving slightly in July. The quantity supplied declined from 3.26 million to 2.88 million gallons a day, while the supplies as a percent of the prior year's supplies declined from 101 to 85 percent during this period. In the table we have also compared the 13 oil companies' data for the Washington, D.C., area with the national averages. This comparison shows that the District area, during May and June, received proportionately less supply (6 and 10 percent, respectively) than the Nation as a whole. This means that the Washington, D.C., area would have received 339,000 gallons a day more gasoline during June if the 13 oil companies had been able to supply the national average. Therefore, during the height of the shortage, May and June 1979, the area received not only significantly less gasoline than a year earlier, but also significantly less than the national average.

It should be noted that although the overall gasoline supply percentage for the Washington, D.C., metropolitan area increased in July, the supply percentage for the District of Columbia itself continued to decline. The District's percentage went from 95 percent in May to 88 percent in June, and then to 83 percent in July. This decline was the subject of a DOE analysis which we discuss in chapter 4. (See p. 36.)

The reason for the differences between the 13 oil companies' Washington, D.C., area and the national supply percentages is that the latter is based on a different mix of companies than the former. The national percentage reflects the average for all companies supplying gasoline anywhere in the United States, while the Washington, D.C., area percentage reflects only the gasoline supplied by the 13 oil companies. Therefore, using a hypothetical example, the national percentage reflects the fact that company A distributed 110 percent of its June 1978 supplies in June 1979 to Arizona, Nevada, and New Mexico (the only States in which it operates), but the Washington, D.C., area percentage does not reflect this.

In addition to comparing the 13 oil companies' Washington, D.C., area supply percentage with the overall national average, we also compared it to the companies' nationwide supply percentages. This latter comparison showed that 8 of the 13 oil companies supplied the Washington, D.C., area proportionately less gasoline during May and June 1979 than they supplied nationwide. This is shown in the following table.



Gasoline Supplied by 13 Oil  
Companies to Washington, D.C., Area  
and Nation--1979  
(percent of 1978 supplies)

<u>Company</u>	<u>May</u>		<u>June</u>		<u>July</u>	
	<u>Area</u>	<u>Nation</u>	<u>Area</u>	<u>Nation</u>	<u>Area</u>	<u>Nation</u>
	(Percent)					
A	96	98	79	83	88	89
B	103	93	114	97	93	90
C	85	89	79	94	119	108
D	187	94	104	90	112	82
E	128	107	114	100	118	97
F	91	101	86	95	92	97
G	83	86	80	86	95	91
H	87	94	79	87	72	80
I	100	114	93	96	95	113
J	102	96	81	75	97	96
K	111	94	110	93	116	97
L	88	105	76	86	81	88
M	83	86	77	79	78	83
Average	93	95	85	88	91	90

Source: GAO tabulation from DOE and 13 oil companies unpublished data.

As seen in this table the supply percentage for the 13 oil companies varied significantly. For example, company D supplied the area 187 percent of the prior year's level in May, while company H only supplied the area 72 percent in July. The data also shows that during May and June eight companies (A, C, F, G, H, I, L, and M) delivered proportionately less gasoline to the area than to their customers nationwide, while five companies (B, D, E, J, and K) delivered more to the area than nationwide. Overall, the 13 companies' area percentages for May and June, 93 and 85 percent, were 2 and 3 percent less, respectively, than these companies' national average. These reductions represented about 66,000 and 102,000 gallons a day of gasoline in May and June, respectively.

Even though DOE regulations require that each oil company generally maintain the same allocation fraction for each State it supplies, there are many reasons why a company may be supplying proportionately different amounts of gasoline to one area than to its customers nationwide. We discussed this subject with representatives of those four companies we

selected for detailed analysis. These observations are contained in the following paragraphs.

Changes in a company's market share are important factors. One company explained that its loss of retail outlets in the Washington, D.C., area caused a reduction in gasoline delivered there. Simultaneously, it gained retail outlets nationwide, since it opened new ones and was required by DOE to supply former customers of other companies. As a result, the percentage of its prior year's supplies delivered to the Washington, D.C., area decreased, while its nationwide percentage increased.

Several companies also said that the lack of significant numbers of priority users in the Washington, D.C., area was a principal factor. They are required to shift gasoline supplies to meet these users' requirements, which reduces the amount available for distribution within the Washington, D.C., area.

One company felt that, in general, urban areas receive proportionately less supplies since they are faster growing and DOE's allocation regulations do not provide for timely adjustments to keep abreast of shifts in population and economic activity.

DOE regulations do allow companies to redirect up to 5 percent of normal supplies from one area to other area(s) experiencing more severe shortages. None of the four companies we visited, however, used this provision in the Washington, D.C., area. Generally, they said that it is a political issue which should more properly be handled by others, such as DOE or the States. Also, most said that they lack information to determine if an area is experiencing a shortage significantly greater than other areas. One company expressed concern about possible lawsuits from retail outlets in those areas whose gasoline supplies would have been reduced.

A State governor also has authority to request gasoline suppliers to redistribute supplies within his State. A DOE official told us, however, that the governors have not used this authority. Also, both Virginia and Maryland officials told us that their governors had not used this authority.

Also, DOE has the authority to act on its own initiative to transfer specific amounts of gasoline from one area to another and to order companies to use different allocation fractions to correct regional imbalances. DOE did not use this authority to address the Washington, D.C., area shortage. It should be noted that DOE has not developed overall criteria

and guidelines to determine when an area has a supply imbalance which requires DOE's expeditious use of its authority.

We could find only one instance where DOE used this authority. In March 1979, DOE ordered 20 gasoline suppliers to redirect supplies to four agricultural co-ops in the Mid-west. However, one of the suppliers challenged the order over the adequacy of the notice, and whether the order could be issued when supplies were available, although at higher prices. An injunction was issued resulting in only 60 percent of the supplies actually delivered.

#### STATE SET-ASIDE PROGRAMS

The Virginia and Maryland suburbs of Washington, D.C., did not always receive a proportionate amount of State set-aside gasoline during the spring and summer of 1979. The Virginia suburbs received only 7.5 percent of the State set-aside in May 1979 although they account for about 22 percent of the State's registered motor vehicles. Virginia officials attributed this to relatively few set-aside applications received from the area. The Maryland suburbs received only 11 percent of the State set-aside in May and only 17.6 percent in June, even though they account for 33 percent of the State's registered motor vehicles. Washington, D.C., sent about 70 percent of its gasoline set-aside to retail gasoline stations.

In 1974 the Federal Energy Administration, a predecessor agency to DOE, established the State set-aside program to make gasoline available to each State to alleviate temporary shortages by providing gasoline to users who cannot obtain fuel from their traditional suppliers. Each State has the flexibility to direct these gasoline supplies to any area within its boundaries in order to meet hardship and emergency requirements. In April 1979 DOE gave the States the option of including gasoline retailers as eligible recipients of State set-aside gasoline supplies. The purpose of this option was to help meet the supply needs of gasoline retailers who demonstrate that they have experienced or will experience a gasoline supply emergency. All three local jurisdictions--Maryland, the District of Columbia, and Virginia--elected to exercise this option.

Originally, the amount of State set-aside was 3 percent of the total volume of gasoline to be delivered into a State's gasoline distribution system each month. However, effective June 1, 1979, in response to the gasoline shortage, DOE increased the amount to 5 percent.

In our review of the Washington, D.C., metropolitan area's gasoline supplies, we were primarily interested in the volume of gasoline supplied to the area, rather than how effectively and efficiently the State set-aside program was being administered. Therefore, we did not review in detail the three jurisdictions' administration of their set-aside programs. In our report on gasoline allocation, however, we discuss DOE's and 11 States' administration of the State set-aside program (see p. 3). (Virginia, Maryland, and Washington, D.C., were not included in this review.) We found wide variations among the States in their administration and distribution of set-aside supplies. We also found that the State offices were not prepared to handle the increased workload brought on by the gasoline shortage.

### Virginia

Virginia's gasoline set-aside program is administered by the Office of Emergency and Energy Services' Energy Division, whose staff increased from 1 to 27 persons during the 1979 gasoline shortage. Ten of these employees were part-time, and some of the 17 full-time employees were temporaries hired to handle the increased workload caused by the shortage.

The Northern Virginia jurisdictions did not receive a proportional amount of set-aside during May 1979. However, they did receive increased volumes during June through August 1979. While Northern Virginia has about 22 percent of the State's registered motor vehicles, it received only 7.5 percent of the State's total set-aside in May. This percentage increased to 23.1 and 38 percent in June and July, respectively.

Distribution of Virginia's  
Gasoline State Set-Aside to Northern  
Virginia Area  
(thousands of gallons)

<u>Jurisdiction</u>	<u>1979</u>				
	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>Total</u>
Alexandria	68.5	216.9	763.1	528.7	1,577.2
Fairfax City	25.7	75.2	227.7	159.5	488.0
Falls Church	-	94.3	168.0	136.2	398.5
Manassas	33.0	97.6	304.3	85.2	520.2
Manassas Park (note a)					
Arlington	32.0	170.2	381.6	191.2	774.9
Fairfax Co.	91.0	319.5	987.4	518.4	1,916.3
Loudoun Co.	103.0	114.3	154.5	215.8	587.6
Prince William Co.	10.0	121.2	475.3	347.3	953.9
Northern Virginia Total	363.2	1,209.2	3,461.9	2,182.3	7,216.6
	=====	=====	=====	=====	=====
Percent of State total	7.5%	23.1%	38%	22.9%	25.2%
Total Virginia set-aside	4,811.8	5,231.9	9,109.8	9,530.8	28,684.3

a/No information provided.

Source: Derived by GAO from data furnished by Virginia energy officials.

State officials acknowledged they may have been slow in directing set-aside to the area but attributed this to the relatively few set-aside applications received from the area. In future similar situations, they said they would direct set-aside supplies to this area sooner.

A Virginia official told us that, although they do not have detailed records on the subject, they estimate that most of their set-aside gasoline goes directly to retail stations. Also, for about 90 percent of the set-aside applications they telephone the applicant's supplier to corroborate the data submitted on the application.

Maryland

Maryland's gasoline set-aside program is administered by the Energy Policy Office of the Department of Natural Resources, which employs three people.

The following table is based on approved gasoline set-aside assignments <sup>1/</sup> and shows that the Maryland counties of Montgomery, Prince George's, and Charles were assigned only about 11 percent of the total State set-aside in May and 17.6 percent in June 1979. However, they did receive increased volumes during July and August 1979. Their percentage of total State set-aside increased to 31.4 and 30.0 percent in those 2 months, respectively. These counties account for about 33 percent of the State's registered motor vehicles.

Assignment of Maryland's Gasoline  
Set-aside to Washington,  
D.C., Area  
(thousands of gallons)

<u>County</u>	-----1979-----				
	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>Total</u>
Charles	145.2	224.6	210.3	218.5	798.6
Montgomery	159.3	420.9	1,015.9	941.3	2,537.4
Prince George's	242.7	657.3	1,230.7	1,342.4	3,473.1
Washington, D.C., area total	547.2	1,302.8	2,456.9	2,502.2	6,809.1
	=====	=====	=====	=====	=====
Percent of State total	11.0%	17.6%	31.4%	30.0%	23.9%
Total Maryland set-aside	4,992.5	7,376.1	7,827.3	8,348.7	28,544.6

Source: Derived by GAO from data furnished by Maryland energy officials.

A Maryland energy official told us that the set-aside was used to keep Maryland commerce moving. Consequently it was directed toward agricultural, industrial, and commercial users and relatively little was directed to gasoline retailers.

About 80 percent of Maryland's set-aside is distributed through jobbers who attest to who ultimately receives the gasoline. A State energy official told us his office

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<sup>1/</sup>We could not determine the actual set-aside gasoline deliveries because Maryland's Energy Policy Office does not maintain this data. However, it did have data on the set-aside gasoline it assigned to oil companies for delivery to the counties.

normally does not verify this information but occasionally randomly checks by telephone with a few of the recipients identified by the jobbers. For the set-aside gasoline which goes directly to retailers or end users, the State Energy Office telephones some of the applicants and asks questions concerning their requests. However, a State energy official told us that his office lacks the resources to comprehensively verify the set-aside applications.

District of Columbia

The District of Columbia's set-aside program is administered by the Office of Planning and Development's Energy Unit. In April 1979 the unit had 10 professionals, which by June 1979 had expanded to 21.

During May through July 1979 the Energy Unit distributed almost 2 million gallons of gasoline. The following table shows monthly set-aside volumes.

District of Columbia's  
Gasoline Set-aside Volumes

<u>1979</u>	<u>Thousand of gallons</u>
Mar.	147.3
Apr.	280.1
May	369.2
June	749.0
July	851.3

Source: Derived by GAO from data furnished by Washington, D.C., energy officials.

During May through July the District directed about 70 percent of the set-aside to retail gasoline stations; the remainder went to the taxi industry and industrial and Federal Government users.

A District of Columbia official told us that the District verified set-aside applications by randomly selecting and visiting three stations weekly. These stations were located on main traffic corridors and had gasoline sales of at least 50,000 gallons a month. The official told us that few problems were identified as a result of these verifications. The principal problem was that a few dealers were not operating during the required hours because their suppliers were not making prompt deliveries.

### CHAPTER 3

#### GASOLINE TILT RULE MAY NOT BE

#### ACCOMPLISHING ITS OBJECTIVES

The Washington, D.C., area's gasoline prices increased an average of 16.7 cents a gallon, from 75.2 cents in March to 91.9 cents a gallon in July 1979. In addition, the banked gasoline costs (allowable costs under DOE regulations which have not yet been passed on to customers and which can be recovered as part of future sales) for the 29 largest refiners increased from \$836 million in January to \$3.7 billion in December 1979. It appears that some of the costs, which were allowed to be passed through by DOE's tilt rule (see p. 19) were banked rather than included as part of the price increases. Therefore, we question whether the tilt rule's ultimate objective of expanded and modified refineries, with the attendant benefit of increased gasoline production, is being met, since apparently some of the allowable price increases are being banked rather than recovered as part of increased prices. In addition, we believe that the other objective of the tilt rule, i.e., easing of the pressure on heating oil prices, has not been met.

The principal cause of the increased retail price of gasoline in the Washington, D.C., area during March through July 1979 was the price charged by the refiners. Based on the data we obtained from the four companies selected for detailed review, their prices for leaded regular gasoline increased an average of 15.7 cents a gallon (32 percent), from 49.1 cents in March to 64.8 cents a gallon at the end of July 1979. Most of this increase was due to their rising crude oil costs, which increased by 12.6 cents a gallon during this period. Both wholesalers and retailers supplied directly by these refiners increased their margins (selling price less purchase cost of gasoline) during the period. The average margin increase for leaded regular gasoline sold by the retailers was 3.3 cents a gallon, a 32-percent increase from the March 1979 margin of 10.4 cents, while the wholesalers' average margin increase was 2.7 cents, a 48-percent increase from the March 1979 margin of 5.6 cents.

#### GASOLINE PRICING STRUCTURE

As discussed in chapter 2, the Mandatory Petroleum Price and Allocation Regulations established a detailed framework for determining maximum prices for petroleum products. These regulations, administered by DOE's Economic Regulatory Administration, are used to determine the maximum allowable price a seller may charge for his gasoline.



## Refiner

For a refiner the maximum allowable price is its May 15, 1973, price plus all product and certain nonproduct cost increases incurred since then. (The May 15, 1973, price was chosen as a base since voluntary price controls had been in effect since January 1973, with the result that refiners and wholesalers/retailers had normalized the prices by May 1973. Also, price wars had ended by this date.) If a refiner chooses not to charge his maximum allowable price, it can bank these unrecovered costs and, with certain limitations, recover them as part of future price increases.

Another factor affecting the prices refiners charge for gasoline is the tilt rule. This rule, established on March 1, 1979, but retroactive to January 1, 1979, permits refiners to pass through to gasoline a greater than volumetric share of the increased costs of producing gasoline. Previously, the regulations required that increased costs incurred since May 15, 1973, be passed through on a pro-rata volumetric basis. For example, if a refiner's gasoline production accounted for 42 percent of the products refined from crude oil, he could recover 42 percent of his increased costs in his gasoline sales. The regulations also permitted increased costs which were initially allocated to other regulated products to be allocated back to gasoline.

The cost of producing gasoline tends to be greater than other products and, relative to its volume, has, according to DOE, historically absorbed a greater proportion of crude oil and refining costs. As DOE deregulated petroleum products, refiners lost the ability to reallocate increased costs of these products to gasoline. DOE felt these limitations reduced the economic incentive of refiners to produce gasoline, and therefore established the tilt rule which allows refiners to allocate to gasoline a maximum of 110 percent of the amount of increased crude oil costs that would have been allocated to gasoline on a pro-rata volumetric basis. The rule also allows refiners to allocate more than a volumetric proportion of nonproduct refining costs to gasoline. The average refiner, which has a gasoline yield of about 42 percent of total refinery output, can allocate to gasoline about 150 percent of the nonproduct refinery costs it could have allocated on a volumetric basis.

## Wholesaler

Until May 1, 1980, middlemen in the marketing process--wholesalers and jobbers--also had to base their selling price on their May 15, 1973, price. They were permitted to pass

through all product cost increases, plus a factor for increased marketing costs. Prior to January 1, 1980, those with sales exceeding 100 million gallons a year were permitted a 3/4-cent-a-gallon increase, while those doing less than that volume were permitted a 1-cent-a-gallon increase. From then until May 1, 1980, the former were permitted a 1-1/4-cent-a-gallon increase and the latter a 2-cent-a-gallon increase. Additionally, wholesalers were permitted to bank their unrecovered product costs. (DOE does not collect data on wholesalers' cost banks.)

On May 1, 1980, DOE changed the wholesaler pricing regulations to allow wholesalers the choice of retaining the pricing method discussed above or adopting a new method which permits a 7.7-cent-a-gallon markup and eliminates the wholesalers' banked costs. On June 15, 1980, this margin was increased to 8.2 cents a gallon.

### Retailer

Prior to August 1, 1979, retail gasoline dealers also used their May 15, 1973, selling price as a base, and were permitted to add any increased product costs plus 3 cents a gallon for increased marketing costs. Certain rent increases and costs of installing vapor recovery systems could also be recovered. They were also permitted to bank any unrecovered product cost increases. This pricing structure caused retail prices to vary widely, created much confusion among both dealers and the public, and was difficult to enforce.

As a result, DOE instituted a new pricing system for independent gasoline retailers, i.e., stations other than those owned and operated by wholesalers or oil companies, which became mandatory on August 1, 1979. The maximum allowable price for each grade of gasoline became the acquisition cost, plus Federal, State, and local taxes, plus a 15.4-cent-a-gallon margin. This margin is revised every 6 months beginning December 15, 1979, to reflect increases in the domestic inflation rate and is now 16.8 cents a gallon. The new pricing system also gave governors the authority, subject to DOE approval, to allow up to an additional 10 cents a gallon. Few governors used this authority; none of the three Washington, D.C., area jurisdictions used it. This authority was rescinded on May 19, 1980. Governors may now only recommend that ERA increase the fixed cents per gallon markup for retailers in their State.

The rule change also eliminated independent retailers' cost banks. DOE believed that banks caused a wide range of prices, were inflationary, and made enforcement difficult.

These rule changes did not affect wholesaler or company-owned-and-operated retail stations. An ERA official told us that oil company stations were not included because

of the difficulty in establishing a transfer price between the refiner and the retail station. Since the gasoline is owned by the oil company from its production until its sale to a consumer, a selling price is not recorded when the gasoline is delivered to the retail station. It would be the essential ingredient in determining the maximum allowable retail selling price under the new rule. Since it would be difficult to establish what this price might have been for a company-owned-and-operated station, these stations were exempted from the new rule. As a result, there is a dual pricing system at the retail level. According to the Lundberg Letter, 1/ the average maximum margin as of September 1979 for company stations was 10.5 cents a gallon, as opposed to the 15.4 cent margin for independents in effect at that time.

On May 1, 1980, DOE changed its regulations to allow wholesalers' retail stations the choice of retaining the pricing method based on their May 15, 1973, selling price or adopting the standard margin, i.e., now 16.8 cents a gallon, and eliminating their banked costs.

GASOLINE PRICES IN  
WASHINGTON, D.C., AREA

During March through July 1979, the average gasoline price increases in the Washington, D.C., area were less than the national average and also less than those experienced in four other major cities. We used the following data from the Department of Labor's Bureau of Labor Statistics to make these comparisons. (DOE does not collect gasoline price data on a city-by-city basis.)

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1/Lundberg Letter, Sept. 21, 1979.

Comparison of 1979 Retail  
Gasoline Selling Prices (note a)  
(cents per gallon)

<u>Location</u>		<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Total increase</u>
Washington, D.C.	Price	75.2	78.6	82.6	88.3	91.9	
	Increase	-	3.4	4.0	5.7	3.6	16.7
New York	Price	74.2	79.1	83.6	90.5	97.9	
	Increase	-	4.9	4.5	6.9	7.4	23.7
Chicago	Price	79.6	84.0	88.4	94.6	99.5	
	Increase	-	4.4	4.4	6.2	4.9	19.9
Los Angeles	Price	76.5	84.5	90.4	94.6	97.8	
	Increase	-	8.0	5.9	4.2	3.2	21.3
Dallas	Price	67.2	71.5	75.5	81.4	85.9	
	Increase	-	4.3	4.0	5.9	4.5	18.7
National average	Price	73.3	78.0	82.3	88.0	93.0	
	Increase	-	4.7	4.3	5.7	5.0	19.7

a/Weighted average of all grades.

Source: Derived by GAO from "Consumer Prices: Energy,"  
Bureau of Labor Statistics.

As shown in the table the average weighted price for a gallon of gasoline in the Washington, D.C., area increased by 16.7 cents a gallon from 75.2 cents in March to 91.9 cents in July. This increase was less than both the national average (19.7 cents) and each of the four other major cities (18.7 to 23.7 cents). In July, the Washington, D.C., area price (91.9 cents) was less than both the national average (93 cents) and three of the four cities. Only Dallas (85.9 cents) had a lower price.

Although the above table only compares the weighted average price of all grades of gasoline, we also made these comparisons for each grade of gasoline. With a few exceptions these comparisons showed that the Washington, D.C., area prices were lower than the national average and three of the four other cities' prices. Again, Dallas had lower prices.

REASONS FOR GASOLINE  
PRICE INCREASES

The principal cause of the increased retail price of gasoline in the Washington, D.C., area during March through July 1979 was the prices charged by the refiners. Although the refiners' price increases were primarily caused by the increased cost of crude oil, they did increase their average gross margins. <sup>1/</sup> In addition, the wholesalers' and retailers' average margins increased. The overall effect of these increases was that retail prices rose by an average of 19.0 cents a gallon for leaded regular gasoline from March through July 1979.

Companies included in our analysis

The price data in this section is based on information for March through July 1979 which we collected from

- 4 oil companies (refiners) which supply the Washington, D.C., area--Exxon, Shell, Phillips, Amoco;
- 32 retail stations and 6 wholesalers directly supplied by the four refiners;
- 17 retail stations supplied by the 6 wholesalers.

We were able to obtain all of the price data requested from the four suppliers and six wholesalers. However, 7 of the 32 retailers supplied directly by the refiners and 8 of the 17 retailers supplied by the wholesalers couldn't supply the requested price data, principally because they did not maintain unit selling price data.

Refiner-supplied retail stations

The average price for leaded and unleaded regular gasoline at refiner supplied stations included in our review increased 19.0 cents and 20.0 cents a gallon, respectively, from March through July 1979, as shown in the following table.

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<sup>1/</sup>The gross margin is the refiner's selling price less the costs of crude oil. From the gross margin, the refiner must pay the costs of purchased petroleum products, refining, marketing, and other costs. The remainder, after deducting these expenses, is the refiner's net profit margin.

Average Gasoline Price Increases  
at Refiner-Supplied Stations in Washington,  
D.C., Area Between March 1 and July 31, 1979  
(cents per gallon)

	<u>Leaded regular</u>				<u>Unleaded regular</u>			
	<u>March 1</u>	<u>July 31</u>	<u>Increase</u>		<u>March 1</u>	<u>July 31</u>	<u>Increase</u>	
			<u>Quantity</u>	<u>Percent</u>			<u>Quantity</u>	<u>Perce</u>
Refiners:								
Crude oil cost	31.1	43.7	12.6	40	31.1	43.7	12.6	40
Gross margin	<u>18.0</u>	<u>21.1</u>	<u>3.1</u>	17	<u>21.5</u>	<u>26.1</u>	<u>4.6</u>	21
Selling price	49.1	64.8	15.7	32	52.6	69.8	17.2	33
Retailers' margin (note a)	10.4	13.7	3.3	32	11.5	14.3	2.8	24
Tax (note b)	<u>13.0</u>	<u>13.0</u>	<u>0</u>	-	<u>13.0</u>	<u>13.0</u>	<u>0</u>	-
Retail selling price (note b)	72.5 =====	91.5 =====	19.0 =====	26	77.1 =====	97.1 =====	20.0 =====	26

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a/The retailer's margin is his selling price less his gasoline purchase costs. His margin is used to pay all operating costs, and any amount remaining after deducting these costs is his net profit margin.

b/In Virginia and Maryland the tax is 13 cents a gallon; in the District of Columbia it is 14 cents a gallon. Therefore the average prices shown in the table would be 1 cent a gallon more in the District of Columbia.

Source: Derived by GAO from data supplied by refiners and retail gasoline stations and from unpublished DOE data.

Refiners' increased selling prices accounted for 15.7 cents (83 percent) of the leaded regular and 17.2 cents (86 percent) of the unleaded regular retail price increases. Most of these increases can be attributed to the cost of crude oil, which increased an average of 12.6 cents a gallon between March and July 1979. After deducting this average crude oil cost increase, 3.1 cents a gallon for leaded regular and 4.6 cents a gallon for unleaded regular would be available to pay other increased costs. Any amount remaining after deducting such increases would reflect increased net profits.

Although the increased retailers' average margins of 3.3 and 2.8 cents a gallon on leaded and unleaded regular, respectively, are only a minor part of the overall retail price increases, they do represent increases in the retailers' margins of 32 percent for leaded regular and 24 percent for unleaded regular. The retailers' average margin on leaded regular increased from 10.4 cents in March to 13.7 cents in July and from 11.5 cents to 14.3 cents a gallon for unleaded regular during the same period. Both of these margins, 13.7 and 14.3 cents a gallon, were close to the 15.4-cent-a-gallon maximum margin for independent retailers adopted by DOE on August 1, 1979.

Sales to wholesalers

The average price paid for gasoline by the six wholesalers included in our review increased by 15.7 cents a gallon for leaded regular and 17.1 cents a gallon for unleaded regular from March through July 1979--essentially the same increases experienced by retailers supplied directly by refiners. As shown in the following table, these wholesalers' average margins increased an average of 2.7 cents (48 percent) for leaded regular and 1.7 cents (26 percent) for unleaded regular during the same period.

<u>1979</u>	<u>Wholesaler Margins</u>	
	<u>Leaded regular</u>	<u>Unleaded regular</u>
	(cents per gallon)	
March	5.6	6.4
July	<u>8.3</u>	<u>8.1</u>
Increase	2.7	1.7
	===	===

The wholesalers in the Washington, D.C., area generally supply the relatively small retail stations located in the

rural areas. The wholesalers' purchase price for gasoline is usually several cents below the price paid by retailers supplied directly by the refiners.

We compared the average price charged by the six wholesalers with the average price charged by refiners for sales directly to retailers. We found that between March 1 and July 31, 1979, the six wholesalers' selling prices had all increased faster than the refiners' selling prices directly to retailers. The size of these increases varied from .9 to 7.8 cents a gallon, with the average being 2.7 cents a gallon. This meant that the customers of these wholesalers were paying up to 7.8 cents a gallon more for their gasoline on July 31, 1979, as a result of increased wholesaler margins. This in turn meant that they had to charge more for their gasoline or make less profit than the retailers supplied directly by refiners.

We were unable to obtain any meaningful data on wholesaler-supplied retail stations' selling prices. Many of these stations were small operations that only recorded total daily receipts, rather than unit selling prices.

#### UNUSUAL INCREASE IN GASOLINE COST BANKS

Although gasoline prices rose significantly during 1979, there are indications that they could have increased even more. The gasoline cost banks of the major refiners increased greatly during 1979--from \$836 million in January to \$3.7 billion in December. These amounts represented DOE allowable costs which had not yet been passed through by the refiners. Although we did not make a detailed analysis of them, it appears that their size resulted from the combined effects of the gasoline tilt rule, the amended procedures for refiling cost reports, the economic conditions of the gasoline market, and the Council on Wage and Price Stability's 1/ guidelines. We believe that these cost banks will continue at relatively high levels since costs allowed to be passed through by DOE's tilt rule are instead being banked because of the economic conditions in the marketplace and/or compliance with the Council's guidelines.

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1/The Council monitors the economy with emphasis on wages, costs, productivity, profits, and prices. It has established voluntary guidelines or standards to slow the inflationary momentum and moderate business and worker expectations.



As previously discussed, DOE's regulations allow refiners to bank certain unrecouped gasoline costs, and, within certain limitations, to recover these costs at a later date. As shown in the following table, the gasoline cost banks of the 29 largest refiners significantly increased during 1979.

Total Gasoline Cost Banks  
For 29 Largest Refiners  
(millions of dollars)

	<u>1977</u>	<u>1978</u>	<u>1979</u>
January	\$ 901	\$1,005	\$ 836
February	1,038	1,265	1,110
March	956	1,065	1,551
April	1,029	1,013	2,067
May	967	849	2,245
June	957	718	2,737
July	869	713	2,989
August	764	353	2,865
September	784	554	3,176
October	879	627	3,158
November	904	709	3,520
December	818	532	3,738

Source: DOE's "Monthly Energy Review," Mar. 1980.

Although the cost banks increased significantly from January through December 1979, during the same period in the previous 2 years these cost banks had decreased. Also, the size of the cost banks from April through December 1979 was much larger than during 1977 and 1978. The 1979 increase in these cost banks reveals that since refiners were not passing through all allowable costs, their prices could have been higher and still have been in compliance with DOE's regulations.

It appears that the significant increase in the gasoline cost banks was due to the combined effects of DOE's amended procedures for refiling cost reports, the gasoline tilt rule, the economic conditions of the marketplace, and the Council's guidelines.

The regulation revising the procedures for filing amended monthly cost allocation reports was issued on March 13, 1979, and stipulated that the refiners had only until June 1, 1979, to file amended cost allocation reports for any months from September 1973 through May 1978. (For any subsequent months the refiners may file amended cost allocation reports up to 1 year from the original filing date.) Prior to this amendment there was no time limit for

filing amended monthly cost allocation reports. As a result of the amendment, refiners had about 80 days to file amended cost reports or lose those allowable costs not already claimed for September 1973 through May 1978. According to an ERA official, this prompted refiners to review their cost records and file amended cost reports to insure that they claimed all allowable costs. These costs were credited to the refiners' gasoline cost banks.

#### Effect of DOE's gasoline tilt rule

As discussed on page 19, the tilt rule was enacted on March 1, 1979, and permits refiners to allocate proportionately more costs to gasoline than were permitted previously. The objective of this rule was to improve the investment climate for expansion or modification of refineries by giving refiners increased flexibility to allocate costs to gasoline. With expanded or modified refineries, there would be increased gasoline production. Another objective of the rule was to take the pressure off heating oil prices by allowing costs to be transferred to gasoline.

Although the tilt rule permits additional costs to be allocated to gasoline, it generally does not require that the costs allocated to the other petroleum products produced from a barrel of crude oil be reduced. For example, assume that the total actual product costs associated with refining a barrel of crude oil are \$20, that on a volumetric basis gasoline would be allocated \$9 and the remaining products \$11, and that the tilt rule permits an additional \$1 to be allocated to gasoline. In this example, the refiner is allowed to allocate \$10 to gasoline and \$11 to the remaining products, for a total of \$21 even though his total product costs are only \$20. It should be noted that the refiner is also permitted to allocate increased nonproduct costs to gasoline at a rate greater than on a volumetric basis. However, we did not use nonproduct costs in our example, since those allocable to gasoline under the tilt rule are based on a complex formula which would have made our example unnecessarily complicated.

We asked ERA officials why the tilt rule does not require that any increased cost allocations to gasoline be allowed only to the extent that the increased costs are not recovered in the prices of decontrolled products, such as heating oil. They said that to do so would impose restrictions on the decontrolled products which could be interpreted as a form of control. They did not want to do this. Rather they wanted to provide refiners increased flexibility to allocate to gasoline costs incurred in its production.

The Council on Wage and Price Stability's guidelines do not recognize the tilt rule. These guidelines set voluntary limitations on price increases for all of a company's product lines as a group. As such, they limit a refiner's total profit from the processing of a barrel of crude oil and in turn the amount of increased costs it can allocate to the refining of a barrel of crude oil. In our previous example, under the tilt rule the refiner could allocate \$21 of product costs to the barrel of crude oil, although its actual costs were \$20. Under the Council's guidelines it can only allocate \$20. The Council's guidelines do not prevent the refiner from allocating a greater share of the costs to gasoline. Any such increase, however, is to be accompanied by a proportionate reduction in the costs allocated to the other products.

Officials from the Council and two of the oil companies told us that the Council's guidelines have restrained gasoline prices. They explained that refiners, to the extent they are complying with the Council's guidelines, are banking the costs allowed under DOE's tilt rule but not allowed under the Council's guidelines. An ERA official agreed that the Council's guidelines are more restrictive than DOE's regulations, but did not know whether gasoline prices were being restrained by the guidelines. We did not analyze the situation to determine whether this happened. While this is a possible explanation, it is also possible that the tilt rule permits more costs to be allocated to gasoline than market conditions permit and that refiners, therefore, can not pass through all of the costs allowed by DOE. Whatever the reason, in both cases costs would have been banked rather than passed through, and it appears that the objectives of the tilt rule were not being met since costs originally intended by DOE to be recovered and reinvested by refiners in the expansion or modification of refineries were instead banked. Also, as our report on Washington, D.C., area home heating oil supplies explains, the price of heating oil went up significantly during 1979 and the refiners' gross margins on heating oil also increased dramatically. (See p. 2.) Therefore, the extent to which the tilt rule eased the pressure on heating oil prices is unclear.

ERA undertook a study whose objective was to examine the need for additional refinery investment incentives. However, this study did not determine whether the tilt rule led to investments in refinery expansion or modification. We were unable to find any other DOE analysis which addressed whether the objectives of the tilt rule are being met.

## CHAPTER 4

### DOE ACTIONS DURING THE

#### GASOLINE SHORTAGE

DOE acted primarily at the national and State level in response to the 1979 gasoline shortage. It became involved in local or metropolitan area situations only in exceptional instances. For example, its actions in response to the Washington, D.C., area's gasoline shortage resulted from complaints received from local government officials and citizens.

In the Washington, D.C., area, DOE audited 360 gasoline retailers during the shortage period and found 26 percent of them to be in violation of its regulations. Also, separate offices within DOE had varying opinions on the reasons for the intensity of the shortage in the Washington, D.C., area. ERA's Office of Special Counsel for Compliance concluded that, although the shortfall in gasoline supplied to the Northern Virginia terminals by the two pipelines was the primary cause of the District of Columbia area's shortage, the intensity of the shortage was due more to panic buying by motorists than to any substantially greater shortage in and near the Nation's capital compared to any other part of the country. DOE's Office of Hearings and Appeals, on the other hand, concluded that Washington, D.C., received significantly less gasoline in June and July 1979 than the national average.

#### PROBLEMS WITH DOE'S GASOLINE ALLOCATION SYSTEM

In our report on gasoline allocation, we discussed why the allocation program was unable to effectively respond to the gasoline shortage by equitably distributing supplies. (See p. 3.) The program's shortcomings were caused by outdated regulations and the lack of a plan to implement the program during a shortage.

One weakness was that the regulations failed to insure equitable distribution throughout the country because they did not coordinate the actions of individual suppliers. Overall supplies to given areas or localities can vary widely because

- not all suppliers serve all States,
- allocation fractions vary among suppliers, and
- suppliers' market shares differ among areas.

Hence, supplies to a given area largely depend upon the mix of suppliers serving the area. Another weakness was the use of historic distribution patterns and business relations as a basis for allocating supplies. This created problems because it did not reflect current market distribution patterns.

These types of problems led to many requests for supply adjustments by customers, resulting in a heavy workload for which DOE was not prepared. Those seeking relief through DOE did not receive timely service and turned to the State set-aside program, thus inappropriately increasing the workload of State energy offices. Also, in most cases decisions were made on applications without verification of the information contained in them.

As a result of these weaknesses, we recommended that the Secretary of Energy revise the allocation regulations to insure a more equitable distribution of supplies.

#### DOE AUDIT EFFORT

ERA is responsible for many of DOE's regulatory programs, including audit responsibility to insure compliance with the Mandatory Petroleum Price and Allocation Regulations. Within ERA, the Office of Special Counsel for Compliance is responsible for enforcing these regulations as they apply to the 34 major refiners, including any wholesalers and retail stations owned and operated by them. ERA's Office of Enforcement has audit responsibility over all other establishments operating in the petroleum industry. It is responsible for enforcing the price regulations for the majority of the Nation's gasoline wholesalers and retailers. In our gasoline allocation report we discuss ERA's overall audit and enforcement activities for gasoline and point out some weaknesses which should be corrected.

The Office of Special Counsel for Compliance has concentrated its efforts on the refinery operations of the 15 largest oil companies, since it was mandated to complete pricing audits of these companies for the 1973-76 period by December 1979. However, the Special Counsel's office temporarily diverted some of its resources to audit 18 major refiners for compliance with the allocation regulations during the 1979 gasoline shortage. Fourteen of these audits were

discontinued before completion, even though there were indications of several possible violations. The Special Counsel's office temporarily discontinued the allocation audits so they could meet their primary goal of completing the 1973-76 pricing audits by the December 31, 1979 deadline. According to an ERA official this deadline was met. The Special Counsel assigned a contractor the task of completing the allocation audits of 10 of the refiners. This work was scheduled to be completed by March 1, 1980, but has been extended to July 1980. We discuss the Special Counsel's operations more fully in our gasoline allocation report.

The Office of Enforcement has primary responsibility for performing price audits of the Nation's estimated 15,000 crude producers, 150 smaller refiners, 450 crude oil resellers, 180 natural gas liquid processors, 180,000 retailers, and 15,000 wholesalers. Enforcement's policy is not to audit a wholesaler or retailer unless it

- suspects a violation,
- has received complaints or other credible indications of significant violations, or
- has granted the wholesaler or retailer an exception or special relief from the regulations.

In February 1979, DOE established a specific hotline to receive reports from consumers on alleged gasoline pricing violations. This hotline is the primary mechanism used to identify potential retail price violations. When Enforcement receives a hotline complaint, it is screened by comparing, through a computerized system, the alleged purchased price against the estimated maximum legal selling price for the particular geographic area. Those complaints showing higher prices than the maximum legal selling price for the area are targeted for audit. In addition, the targeted gasoline retailers are sent form letters describing the allegation, providing a pamphlet on how to comply and informing the owner of the station that he may be subject to an audit.

Prior to August 1, 1979, enforcement was difficult because a retailer's maximum lawful selling price was based on his May 15, 1973, price, the allowable cost increases since then, and his cost banks. These factors varied widely among retailers. However, on August 1, 1979, a maximum lawful selling price regulation fixed maximum dealer margins and eliminated independent retailers' cost banks, thereby simplifying both the enforcement of the regulation and the ability of the retailers to comply.

During the February 15 through August 17, 1979, period, Enforcement audited 360 retailers in the Washington, D.C., area. 1/ It found 95 violations (26 percent of those audited) and collected over \$7,500 in fines. Price overcharging ranged up to 12 cents a gallon. The following table shows the disposition of the violations.

	Feb. 15, 1979 through <u>Aug. 17, 1979</u>
Audits completed	360
Audits without violations	265
Audits with violations	95
Consent orders (note a)	80
Notices of probable violations (note b)	9
Interim remedial order for immediate compliance (note c)	6
Percent found in violation	26%

a/A consent order is issued when a retailer acknowledges he is in violation of pricing regulations and agrees to immediately rollback his prices.

b/At the time of these audits, a notice of probable violation was issued when a retailer who was in violation of pricing regulations refused to sign a consent order. As a general rule, Enforcement now issues Proposed Remedial Orders and bypasses the notice of probable violation stage.

c/An interim remedial order for immediate compliance is issued when Enforcement finds: (1) There is a strong probability that a violation has occurred, is continuing, or is about to occur; (2) Irreparable harm will occur unless the violation is remedied immediately; and (3) The public interest requires the avoidance of such irreparable harm through immediate compliance and waiver of the normal procedures.

Source: Unpublished DOE data.

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1/An audit is used to determine whether a firm is in compliance with DOE regulations concerning product pricing, price posting, and recordkeeping requirements. The audits of the Washington, D.C., area retailers involved visits to the retail stations.

Enforcement received a few complaints about wholesalers in the Washington, D.C., area during the February 15 through August 17, 1979, period. In May and August they issued 11 orders requiring wholesalers to prove that they did not exceed their maximum legal selling price. Subsequently, during November 1979, Enforcement completed an audit at one of these wholesalers and issued a notice of probable violation. Seven others are in various stages of completion, while the remaining three were closed as there was little likelihood that violations had occurred.

Enforcement's overall approach to auditing wholesalers is to accumulate information from retailer audits and follow up on the suspicious items at the wholesalers. Additionally, it depends upon retailers' complaints, although it realizes that retailers may be reluctant to complain about their wholesalers for fear of losing their source of supply.

#### DOE ANALYSES OF THE GASOLINE SHORTAGE

DOE performed three different analyses to determine the cause of the 1979 gasoline shortage. One addressed the nationwide supply situation with special emphasis on how the shortage affected the State of California. The others reviewed aspects of the Washington, D.C., area supplies to determine if the area had been shorted.

On May 25, 1979, the President requested that DOE investigate how oil company activities had affected gasoline supplies. At that time California appeared to have been especially hard hit, and the President directed that special attention be given to the causes of that State's shortage.

DOE's July 24, 1979, preliminary findings indicated that

- petroleum imports had been inadequate to meet demand,
- the United States had received a slightly smaller share of world oil production than in prior years,
- the level of domestic crude oil production was about 200,000 barrels a day below the 1978 level,
- there was no evidence of hoarding of oil by refiners,
- refinery yields of gasoline and distillate were lower than in the recent past, because refiners maintained or increased output of lighter products, such as jet fuel and kerosene, and



--the actions by refiners in California and the remainder of the West Coast appeared to be similar to the rest of the country.

The report also said that Federal price and allocation regulations appeared to contribute to the shortage in some areas of the country. DOE found that historic base periods did not reflect the most recent changes in gasoline demand. Repeated changes in the allocation regulations caused confusion and uncertainty. Finally, there were indications of abuse in the system, which exacerbated the shortage. The final report to the President had not been issued at the time of our review.

Soon after the California shortage, gasoline lines began to appear in the Washington, D.C., area. There were reports of area terminals overflowing with gasoline and diversion of incoming supplies. A local Congressman requested DOE determine whether these reports were true.

This review was undertaken by ERA's Office of Special Counsel for Compliance. Its October 1, 1979, report found: 1/

--There was a substantial reduction in the amount of motor gasoline available in the Washington, D.C., area due to a reduction in pipeline deliveries, which caused disbursements from terminals operated by major refiners in the Northern Virginia area to be reduced.

--There was no evidence that inventories were being withheld by any of the major refiners having terminal facilities in Northern Virginia; inventories on a month-end basis actually decreased over inventory levels for the same period during 1978.

--Overall gasoline supplies available in the Washington, D.C., area during May through July 1979 were apparently 10-12 percent less than available during the same period in 1978.

ERA concluded that, although the shortfall in gasoline supplied to the Northern Virginia terminals by the two pipelines was the primary cause of the Washington, D.C., area's shortage, the intensity of the shortage was due more to panic buying by motorists than to any substantially greater shortage

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1/"A Review of Motor Gasoline Deliveries and Disbursements from Northern Virginia Terminaling Facilities Operated by Major Refiners, May-June 1979."

in the Washington, D.C., area than in any other part of the country. We disagree. As discussed in chapter 2, the Washington, D.C., area received significantly less gasoline during May and June 1979 than the national average.

DOE's Office of Hearings and Appeals concluded, based on a comparison of Washington, D.C., supplies with five other cities, that the District received less gasoline than the national average. On July 18, 1979, the city of Washington, D.C., applied for temporary exception 1/ to DOE's gasoline allocation regulations, since they believed the District had not been receiving sufficient supplies. As a result of its initial analysis OHA rejected the request on the basis that Washington, D.C., had not suffered a serious supply imbalance which adversely affected its economy. After receipt of actual data for July, however, OHA reversed its decision and concluded that Washington, D.C., had been unfairly burdened, since during both June and July total gasoline supplied nationwide was 95 and 92 percent of 1978 levels, while the District received only 88 and 83 percent of 1978 volumes. As a result, OHA issued an order which provides that the District's monthly gasoline allocation will be increased if certain criteria are met. The OHA findings are consistent with our analysis which is set forth in chapter 2.

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1/Exception relief is granted when an applicant proves that a firm or a class of persons is experiencing a serious hardship, gross inequity, or unfair distribution of burdens as a result of DOE's regulations.

## CHAPTER 5

### CONCLUSIONS AND RECOMMENDATIONS

During the height of the Washington, D.C., area's gasoline shortage in May and June 1979, the 13 major suppliers for the area delivered 93 and 85 percent, respectively, of the gasoline they delivered a year earlier. Nationwide these percentages for all suppliers were 99 and 95 percent. Therefore, the Washington, D.C., area received 6 percent less in May 1979 and 10 percent less in June 1979 than the national average. The principal reason for this difference was the area's mix of suppliers. The 13 oil companies had less gasoline available for delivery than the national average for all suppliers.

Another reason the Washington, D.C., area received less gasoline in May and June 1979 was that 8 of the area's 13 major suppliers delivered proportionately less gasoline to the Washington, D.C., area than to the Nation as a whole. These suppliers delivered an average of from 2 to 3 percent less to this area in these months than nationwide. The reasons given by the oil companies for this difference were

- changes in a company's market share in the Washington, D.C., area as compared to nationwide,
- lack of significant numbers of priority users in the Washington, D.C., area, and
- proportionately less supply received by urban areas since they are faster growing and DOE's allocation regulations do not provide for timely adjustments.

The State set-aside programs functioned differently in the three jurisdictions. In Virginia, the Washington, D.C., suburbs received only 7.5 percent of the set-aside gasoline in May, although that area has about 22 percent of the State's registered motor vehicles. This share increased to 23 percent in June and 38 percent in July. In Maryland the policy is to use set-aside supplies primarily for agricultural, industrial, and commercial users. As a result Maryland's Washington, D.C., suburbs were assigned only 11 percent of the State set-aside in May and 17.6 percent in June 1979. This share increased to 31.4 percent in July and 30 percent in August. These counties account for about 33 percent of Maryland's registered motor vehicles. In the District of Columbia, 70 percent of the set-aside went to retail gasoline stations.

DOE and the oil companies have the authority to transfer specific amounts of gasoline from one area to another to correct regional supply imbalances. Neither of these entities exercised this authority to address the Washington, D.C., area shortage. DOE has not developed overall criteria and guidelines to determine when an area has a supply imbalance which requires DOE's expeditious use of its authority. Also, we could find only one instance where DOE has used this authority.

Based on our review of the four oil companies we selected for detailed review and a sample of their local retailers, we found that the retail price for leaded regular gasoline increased from 72.5 cents to 91.5 cents (19.0 cents) a gallon from March through July 1979. Most of the increase was due to increased prices charged by the refiners, which in turn were primarily caused by increased crude oil costs. For example, the refiners' selling price increased from 49.1 cents in March to 64.8 cents a gallon in July 1979, 15.7 cents a gallon (32 percent). Of this increase, crude oil accounted for 12.6 cents. The remainder, 3.1 cents (a 17-percent increase over the March margin of 18 cents a gallon), would represent the increase in gross margin. The retailers also increased their margins--from 10.4 cents in March to 13.7 cents in July--an average of 3.3 cents a gallon (32 percent).

The six wholesalers included in our review also increased their margins during this period. Their margins for leaded regular gasoline increased an average of 2.7 cents a gallon between March and July 1979.

Although these price increases were significant, there are indications that they possibly could have increased even more. The banked gasoline costs for the 29 largest refiners increased from \$836 million in January 1979 to \$3.7 billion in December 1979. These banked costs represent costs allowed by DOE which have not yet been passed on to the refiners' customers.

The significant increase in these cost banks appears to have resulted from DOE's amended procedures for refiners' filing of costs reports, the differing provisions of DOE's gasoline tilt rule and the Council on Wage and Price Stability's guidelines, and/or the economic conditions of the marketplace. The amended procedures for filing cost reports were effective May 1, 1979, and allowed the refiners until June 1, 1979, to refile cost allocation reports for any months from September 1973 through May 1978. The objectives of DOE's tilt rule were to improve the investment climate for expansion or modification of refineries by giving

refiners increased flexibility to allocate costs to gasoline and to take the pressure off heating oil prices by allowing costs to be transferred to gasoline. The tilt rule generally allows additional costs to be allocated to gasoline without a proportionate reduction in the costs allocated to the other petroleum products produced from a barrel of crude oil.

The Council on Wage and Price Stability's guidelines do not recognize the tilt rule, and therefore require that any increased cost allocation to one product be offset by a proportionate reduction in the costs allocated to the other products. Therefore, refiners complying with the guidelines would bank some of the costs allowed by the tilt rule. Costs could also be banked by those refiners who believed that market conditions would not permit full pass through of all allowable DOE costs.

In our previous work we found that heating oil prices increased significantly during 1979. (See p. 2.) In fact, these increased prices were much more than needed to cover the increased costs of crude oil.

In view of these developments, we believe it is questionable whether the objectives of the tilt rule are being met. Costs intended by DOE to be recovered and reinvested by refiners in the expansion or modification of refineries are instead being banked. Heating oil prices have not been tempered; they have risen. Even so, DOE has not analyzed the situation to determine whether the objectives of the tilt rule are being met.

DOE's gasoline allocation system was unable to distribute supplies equitably. Also, DOE's overall gasoline audit and enforcement activities during the shortage could have been improved.

In the Washington, D.C., area, DOE audited 360 gasoline retailers between February 15 and August 17, 1979, primarily as a result of information received from its hotline. DOE found that 26 percent of the area retailers audited were in violation of the regulations.

#### RECOMMENDATIONS TO THE SECRETARY OF ENERGY

We recommend that the Secretary of Energy establish appropriate criteria and guidelines so that DOE can expeditiously use its discretionary authority to direct companies to shift supplies to areas where supply imbalances occur in future shortage situations. In using this discretionary

authority, the Department should, through its monitoring efforts, use its information and work with State and local government agencies to identify areas experiencing supply imbalances.

In view of the information we obtained about the gasoline tilt rule, the Secretary of Energy should determine exactly how this rule has been working, with specific emphasis on the rule's stated objectives of improving the investment climate for expansion or modification of refineries by giving refiners increased flexibility in allocating costs and of taking the pressure off heating oil prices. Also, the Secretary should determine whether the tilt rule has caused the significant increase in gasoline cost banks, and, if so, whether revisions to the tilt rule are needed.

#### AGENCY COMMENTS

By letter dated May 12, 1980, DOE provided comments on a draft of this report. (See app. III.) While DOE agreed with many of the report's conclusions they disagreed with certain aspects of the report which they thought should be further clarified. Following is a discussion of those aspects.

DOE believed that the report implied that the Washington, D.C., area gasoline shortage was a unique situation, when, in fact, at least 14 other comparable metropolitan areas experienced similar gasoline supply problems. We have made it clear that other areas also experienced shortages. However, our main point still is valid. That is, DOE should use its discretionary authority to direct companies to shift supplies to areas where supply imbalances occur.

DOE said that the report needed more balanced evaluation of the gasoline allocation program. We made changes to that section of the report on pages 30-31 to reflect these concerns. However, it should be noted that our detailed analysis of the allocation program is in our gasoline allocation report. 1/

Concerning the gasoline tilt rule, DOE believes that it is too early to evaluate its ultimate effectiveness and that

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1/"Gasoline Allocation: A Chaotic Program In Need Of Overhaul," EMD-80-34, Apr. 23, 1980.

sufficient data is not available to do so on even a preliminary basis. While it may be difficult to determine whether the tilt rule is operating as planned, we believe that DOE has a responsibility to gasoline consumers to explain what has caused the abnormal rise in gasoline cost banks and what part the tilt rule played. We do not agree that it is too early for such an analysis. The tilt rule has been in effect for over a year and cost banks increased \$2.9 billion in 1979 to a total of \$3.7 billion. Also, even though sufficient data may not now be available, DOE should accumulate the necessary data upon which to base its analysis. We believe it is DOE's responsibility to be able to analyze the impacts of its regulations.

DOE also furnished comments on the section of the report (see pp. 32-34) which discusses DOE's Office of Enforcement. We made the appropriate changes to reflect these comments.

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### United States Senate

COMMITTEE ON COMMERCE, SCIENCE,  
AND TRANSPORTATION  
WASHINGTON, D.C. 20510

June 28, 1979

Mr. Elmer B. Staats  
Comptroller General  
General Accounting Office  
441 G Street  
Washington, D. C. 20548

Dear Mr. Staats:

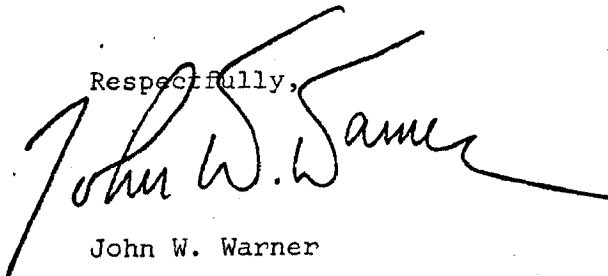
The Washington Metropolitan Area is suffering from serious shortages of gasoline resulting in dramatic price increases. There are also strong indications that the same difficulties may be encountered with home heating fuel this winter by area residents who heat their residences with so-called middle distillates or No. 2 fuel oil.

I am requesting that you review the situation in the Washington Metropolitan Area to determine (1) the reasons that gasoline shortages have shown up so dramatically in this area, (2) the levels in the marketing system where price increases have occurred, and (3) how effective the Department of Energy has been responding to the shortages and rising prices.

I would also appreciate it if you would include similar information related to the availability and price of home heating fuel for the area this winter, and any problems attendant therefore that you may foresee.

Kindest regards,

Respectfully,



John W. Warner

JWW/cjb



LISTING OF 14 OIL COMPANIES  
INCLUDED IN OUR ANALYSIS OF THE  
PRICE AND SUPPLY OF GASOLINE IN  
THE WASHINGTON, D.C., METROPOLITAN AREA

Amerada Hess Company  
Atlantic Richfield Company  
Cities Service Company  
Continental Oil Company  
Crown Central Petroleum Corporation  
Exxon Corporation 1/  
Gulf Oil Corporation 2/  
Mobil Oil Corporation  
Phillips Petroleum Company 1/  
Shell Oil Company 1/  
Standard Oil Company (Indiana) 1/  
Standard Oil Company (Ohio)  
Sun Petroleum Products Company  
Texaco, Inc.

1 /These are the companies we selected for detailed analysis.

2/This company was not able to provide the information on a monthly basis as requested. Therefore, our analysis is based on data from the other 13 companies.



Department of Energy  
Washington, D.C. 20585

MAY 12 1980

Mr. J. Dexter Peach  
Director  
Energy and Minerals Division  
U.S. General Accounting Office  
Washington, D.C. 20548

Dear Mr. Peach:

We appreciate the opportunity to review and comment on the GAO draft report entitled "Effects in Washington, D.C., Area Of 1979 Gasoline Shortage: Supplies Less Than National Average; Price Increases Comparable." While the Department of Energy is in agreement with many of the conclusions contained in the subject report, we disagree with certain aspects of the report which should be further clarified. Specifically, we disagree with the following: the implication that the Washington, D.C. area shortage was a unique situation; the incomplete and inaccurate analysis of the Department's "tilt" rule; the lack of a more balanced evaluation of the allocation program which served as the basis of the Department's response to the 1979 gasoline experience and the draft report; and the misconceptions as to the responsibilities and procedures of the Department's Office of Enforcement.

The draft report states that "... most other locations across the nation did not experience the same gasoline supply problems and, therefore, had little or no trouble purchasing the gasoline they wanted." This statement leads the reader to believe that the Washington, D.C., area was uniquely affected by the gasoline supply problems last year. In fact, at least fourteen other comparable metropolitan areas experienced similar gasoline supply problems. The report requires clarification in this regard. We do not mean to suggest, however, that the gasoline allocation program should not be improved. As noted below, we believe that improvements are possible.

The draft report discusses design weaknesses of the allocation program in terms of its inability to correct supply imbalances. The allocation system in its present form is intended to distribute gasoline based on historical purchase patterns, and is not intended to be self-adjusting to correct current supply imbalances. Under the current regulations, the Department may respond to supply imbalances on a case-by-case basis. As the draft report correctly notes, there have been difficulties in utilizing this authority due, in part, to inadequacies of available data, a situation which we are attempting to correct. In addition, the Department's Office of Hearings and Appeals (OHA), as noted in the draft report, has established a "trigger" mechanism by which the District of Columbia could obtain additional gasoline supplies after demonstrating that it satisfied the Department's criteria.

The draft report also indicated that an outdated base period was being used for the distribution of gasoline. However, during Spring and Summer 1979 an updated base period predicated upon purchases during the previous year was in use.

We have been engaged in extensive analysis of possible regulatory alternatives, particularly in light of the 1979 experience. The Department believes that certain problems which occurred in 1979 due to the expedited issuance of new regulations without advance notice to the public may be avoidable when implementing future changes to our allocation regulations. In addition to possible revisions to our gasoline allocation rules, we are considering longer-term solutions for dealing with supply problems which would require legislative action. Any possible revisions to the allocation program must, of course, be balanced against its scheduled termination on September 30, 1981.

We expect to issue a notice of proposed rulemaking shortly on the gasoline allocation program, which, if adopted as proposed, would make significant changes in the existing program. In view of the current, improved gasoline supply situation and the likelihood of adequate gasoline supplies throughout the summer, we intend to follow the normal rulemaking procedures, including the preparation of a regulatory analysis and the solicitation of public comments. Should the gasoline supply situation unexpectedly worsen to a significant degree, this rulemaking could be expedited under emergency procedures.

The draft report questions whether the tilt rule's objectives of improving the investment climate for expansion or modification of refineries for the purpose of increasing gasoline production and of relieving the pressures on home heating oil prices have been met. It recommends that the Department should determine how the rule has been working. We do not believe that the tilt rule has been in existence long enough to determine its ultimate effectiveness. Nor are the data available sufficient to do so on even a preliminary basis.

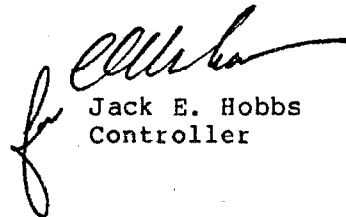
The draft report points to the size of the banked gasoline costs as an indication that the rule is not serving its intended purpose and offers a number of possible reasons for the size of banks, including the tilt rule. However, it is not now possible to identify what portion of the banked gasoline costs may be attributable to the tilt rule. Nor is it possible to evaluate the effectiveness of the rule solely by measuring increases in banked gasoline costs which in the future may be shown to be attributable to the rule. To evaluate the effectiveness of the rule, we must also determine the amount of allowable costs that have been passed through on gasoline prices as a result of the rule, and ultimately must consider the resultant increases in refinery production over a period of time. It is important to note that refinery capability to produce gasoline, especially unleaded gasoline, has increased since the adoption of the tilt rule. This has been possible because of additional reforming capacity and upgrading of process equipment at refineries, although it is not clear whether this increased production capability is due to the tilt rule.

With respect to the second objective of the tilt rule, price data for the period between December 1978 and October 1979 suggest that price rises for home heating oil are not fully supported by increases in crude oil costs alone. However, we do not believe that these price increases are necessarily inequitable. For example, the prices for motor gasoline, a controlled product, have risen consistent with home heating oil prices. In the past years, the Department conducted two studies examining the costs and revenues of nine major refiners of No. 2 heating oil. Two other studies, including a "full barrel" analysis, are currently underway. The results of these studies should provide an additional basis for evaluating the effectiveness of the tilt rule.

The Department's Office of Enforcement (Enforcement) price auditing function covers more than just the 180,000 gasoline retailers and 15,000 wholesalers indicated in the draft report. Many other categories of firms are also included. Because of the increased workload stemming from the establishment of the "hotlines" in February 1979, Enforcement now utilizes a computer to evaluate consumer complaints on alleged gasoline pricing violations. Allegations are compared to a statistical norm established for the geographic region from which a complaint is received. Only when it is determined that a violation is probable will Enforcement proceed to send the gasoline retailer a notice describing the allegations. The August 1, 1979, amendment to the price regulations establishing maximum lawful selling prices for independent retailers has both simplified enforcement and has made compliance by retail gasoline dealers much easier. In addition, new price regulations establishing simplified maximum lawful selling prices for resellers and reseller-retailers were recently issued. These new price regulations (enclosed), noted in the draft report as pending proposals, will aid in enforcement efforts as to the affected class.

Additional detailed comments, including those of an editorial nature, have been provided directly to members of your staff. Let me express, again, the Department's appreciation for the opportunity to review and comment on this draft report.

Sincerely,

  
Jack E. Hobbs  
Controller

Enclosure

(004292)





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