

September 25, 1979

"PHANTOM ALLOCATIONS" AND THE COMING HEATING OIL SHORTAGE

INTRODUCTION

To the motorists lined up at our nation's gasoline stations earlier this year, the sudden and unexpected scarcity of a commodity whose abundance had previously been taken for granted was a profound shock. As the lines persisted, the initial shock began to turn into anger, and the anger was focused largely at the nation's oil producers. The general public, by and large, was convinced that the shortages were artificial, created by an oil oligopoly in collusion with the OPEC cartel, in order to raise prices. The rapid and significant price rises accompanying the gas lines served to further fuel public suspicions, as did the loosening of supplies which occurred as prices approached the level of \$1 per gallon. Subsequent analyses of the situation indicate that the public was half right. To a large degree, the shortages were artificially created, but not by the oil companies. The real culprit was the complex set of regulations promulgated by the Department of Energy for the allocation of petroleum supplies. Moreover, other actions by DOE seem destined to insure that there will be widespread shortages of diesel fuel in agricultural regions during peak harvest periods, and shortages of heating oil in many regions of the nation during the harshest part of the winter. Worse yet, all of this will be occurring at a time when the nation will be "awash in middle distillate" according to one oil company official.

The tightening of supplies of middle distillate both for agricultural and home heating purposes can be directly linked to actions on the part of the Department of Energy. Further, DOE was at least partly aware of the possible consequences of its actions when it first considered them late last spring. A Department of Energy document dated June 6, 1979, which was not released to the public, stated, "Diesel fuel needs for farm production range from a low of 3 percent of total demand

in December and January to a peak of 15 percent in May. Another peak occurs in September when the fall harvest is in full swing and diesel needs that month exceed 10 percent. Diesel requirements for spring planting, summer irrigation and fall harvest conflict with the building of middle distillate reserves for the winter heating season." In other words, the Department of Energy was aware that the pressures it was placing on refiners to retain supplies of middle distillate in primary storage could cause supply dislocations, even as those pressures were being brought to bear. While not formally allocating middle distillate supplies, they were creating situations in which refiners would be forced to informally allocate them, in spite of the fact that previous experience with price and allocation controls for gasoline had resulted in both higher prices and spot shortages.

For the public, the DOE actions assure a winter of uncertainty. Should temperatures remain moderate it may be that supplies will be moved to the secondary and tertiary level before severe cold makes transport of large amounts of supply impossible. If refiners are encouraged to begin shipments to oil jobbers and retail outlets immediately, there may be adequate diesel on hand for the fall harvest of winter wheat. On the other hand, should DOE remain adamant in its fixation to retain heating oil stocks in primary storage (i.e. in the large tanks maintained by refiners at terminals and other bulk storage facilities) the present 16 million barrel shortfall at the local level, where the end users are, could expand to one amounting to as much as 40 million barrels.² Should a shortage of this magnitude coincide with temperatures of abnormal severity, as have been experienced in some areas of the nation during the last two winters, extensive, unnecessary hardships would result. Additionally, the retention of large stocks of middle distillate in primary storage could limit the build up of stocks of motor gasoline, further aggravating what is already foreseen as a tight supply situation for the coming spring.

The effect of the Department of Energy consultations with the 32 major refiners of middle distillate which took place early this spring was to create a "phantom allocation" system through coercion. Refiners were presented with theoretical inventory and production plans, and told in essence that should they not comply with the Department's informal mandate, formal refinery yield orders could be issued. The Department was under considerable pressure to act. The Iranian oil fields had been shut down by supporters of the Ayatollah Khomeini, our nation had just experienced an exceptionally severe winter, and motor gasoline consumption was unexpectedly high. These pressures do not explain why, however, the Department choose to ignore the evidence from its previous

-
1. Internal Department Memorandum "Middle Distillate Situation, June 6, 1979."
 2. House Small Business Committee Subcommittee on Antitrust.
 3. Petroleum Industry Research Foundation.

experience with gasoline price and allocation controls, which clearly demonstrated that such controls simply do not work, and that the only way to insure adequate supplies of a product⁴ would be to allow the market to function as freely as possible. Moreover, there is also the unanswered question of why the Department chose to ignore its own internal assessment of the price and allocation controls on gasoline in making its decision.

THE EXPERIENCE WITH CONTROLS ON GASOLINE

As noted, the only experience comparable to the present market intervention of the Department of Energy in middle distillate supplies is the experience over the last six years with gasoline price and allocation controls. Since there is pressure mounting to impose similar controls on middle distillate, it is perhaps particularly appropriate to examine just what the effect of the controls on gasoline was.

Price and allocation controls were imposed on our nation's suppliers by the Mandatory Petroleum Price and Allocation Regulations (10 CFR Sections 211 and 212). Under those rules, the price at which gasoline could be sold, at all levels, and how much and to whom gasoline could be sold was controlled. An internal DOE memorandum notes, "The regulations freeze supplier/purchaser relationships as of a 1972 monthly base period, requiring suppliers to meet the demands of their base period customers. The 1972 supplier-purchaser relationships are thus essentially given administrative longevity. Even if a 1972 transaction was a one-time-only spot purchase, it has been given the effect of an indefinite term contract."⁵ A similar freeze is in place regarding the price relationships which were in effect at the time the regulations were promulgated. They are in essence geared to the market which existed on May 15, 1973. It would seem obvious that the creation of such an arbitrary and rigid framework within which to conduct the voluminous transactions normally associated with the market for gasoline would of necessity result in the propagation of numerous and severe market imperfections. Of these perhaps the most onerous is that the regulations, which were intended to reduce the cost of gasoline at the retail level, actually resulted in higher costs.

According to the Department of Energy assessment of the impact of the price and allocation regulations, "The net result of the supplier/purchaser freeze and effective elimination of competitive allocation of supply is increased costs to consumers. The regulations foster inefficient allocation of resources, and have arbitrarily slowed the evolution of market trends towards

-
4. Department of Energy Office of Competition Memorandum on Gasoline Deregulation.
 5. Department of Energy Office of Competition Memorandum on the effects of the Petroleum Price and Allocation Regulations.

fewer and higher-volume retail outlets. Many inefficient marketers have been protected by the regulations at the possible expense of efficient marketers."⁶ In other words, the normal competition on price and the normal improvements in marketing which would have resulted in savings to consumers have been hampered by regulations promulgated, purportedly to insure consumers the lowest possible price. There is a certain irony in this which is difficult to overlook.

The regulations have also had considerable impact on the level and nature of investment in refining facilities. According to the Department of Energy's Office of Competition, "This inability to earn an adequate return on new capital investment, coupled with fixed profit margins acts as a disincentive to needed capital investment. Although consumer demand for unleaded and high-octane gasoline has greatly increased in the past few years, and continues to increase, that increased demand has not triggered normal price and investment changes. Refiners have not made investments in unleaded gasoline production facilities sufficient to meet increased demand because price controls prevent the profitability of that product from rising with the changing demand."⁷

Since the Environmental Protection Agency has mandated the use of unleaded fuel in vehicles manufactured in the United States, and for most vehicles imported into this country, future demand for unleaded fuel will continue to rise. In 1975, unleaded gasoline accounted for only 13 percent of total gasoline demand in the United States. By 1981, it is expected that the share of total gasoline demand accounted for by unleaded fuels will rise to 57 percent. Should the present situation persist, and controls on motor gasoline continue, the disincentives for capital investment in facilities to produce this type of fuel will also continue. This could mean sharply rising levels of refined products in addition to our normal imports of crude oil.⁸ Nor would some adjustment of refiners' margins on unleaded fuel address the long-range problem.

The Office of Competition memorandum notes "...the defects in these kinds of regulations cannot be cured by amending them. It is always possible to ascribe some perversity or market distortion to a particular regulation, or to the fact that it appears to be out-of-date. But this is misleading. If a moving part of a machine is clamped, and the machine fails to operate properly, it may always appear that its performance could be improved by altering the position of the clamp. This is true, but it obscures the more fundamental fact that the clamp should not be there at all."⁹

-
6. Ibid.
 7. DOE memorandum on gasoline deregulation.
 8. Petroleum Research Institute, Inc.
 9. DOE memorandum on gasoline deregulation.

Regulations do truly function like a clamp. A clamp on innovation, on efficiency, and on investment. They need not be pervasive in order to do harm. In fact, "placing controls on even one point in the marketplace causes distortions elsewhere so that controls must be continually added and amended without hope of full correction or of catching up to the dynamic in the marketplace."¹⁰ In this rush to catch up, there is a constant shifting of burdens, subsidies, and penalties, which makes rational planning virtually impossible. Firms trying to function in a regulated market need to spend inordinate time and energy attempting to anticipate what the regulator's next move will be, instead of following market trends. In addition to diverting resources, it creates an atmosphere of uncertainty which inhibits the dynamic forceful action a truly competitive market requires.

The DOE analysis of gasoline regulation noted, "Instead of encouraging experimentation in new marketing techniques, the DOE regulations penalize the experimenter in out-of-pocket dollars as well as retard the diffusion of the innovation itself. Most at odds with the competitive process, the allocation controls have protected many inefficient firms that would not have survived in an uncontrolled market. The need and even opportunity to bargain for supply has been eliminated to a large extent. The allocation controls together with the price controls have arbitrarily placed some firms in very favorable circumstances and others in untenable situations."¹¹ It is exactly this problem which is now developing with regard to middle distillate.

THE GENESIS OF THE PHANTOM ALLOCATION

To fully appreciate how an incipient shortage of middle distillates can exist in the face of apparently abundant supply, it is necessary to probe the events and circumstances influencing energy policy early this year. To a large degree, it is the responses to those events, coupled with the natural tendency of bureaucracies to follow previous patterns in the search for solutions to current problems which have given rise to this apparent paradox.

By April of 1979 U.S. energy planners were in a state of near panic. The first effects of the shutdown of the Iranian oil fields were beginning to make themselves felt in an increasing shortage of light crude. At the same time, a combination of unusually cold weather during the first quarter of the year, and unexpectedly high demand for gasoline had operated to cause a drawdown of distillate stocks to a level around 18 percent below the same period for the previous year. Gasoline demand had remained high and stocks dropped to extremely low levels during

10. Ibid.

11. Ibid.

late 1978. In early 1979, refiners were producing proportionately more gasoline and less distillate than they normally would have to rebuild stocks and cope with record demand. As a result, less distillate than normal was produced.

Energy Department planners, anticipating the advent of the summer seasonal peak in demand for gasoline, with its concurrent higher production of that fuel, feared that the production of middle distillates would be inadequate to meet the winter's heating oil needs, should this winter prove to be as harsh as the previous two have been. As a result, there was a general feeling that some sort of action was necessary. At the same time, the Department was coming under increasing pressure from both the public and the Congress as the result of the lengthening lines at our nation's service stations. The growing sense of urgency, coupled with increasing pressure, resulted in the Department calling together representatives of the nation's 32 largest refiners in May of 1979.

The 32 refiners consulted by the Department of Energy accounted for some 80 percent of the nation's distillate production according to their own figures. The purpose of the consultations was to convince these companies to increase their production of middle distillates, and to retain that production in primary storage. (Primary storage is generally defined as facilities with capacities of 50,000 barrels or more.) Their ultimate goal was to have at least 240 million barrels of middle distillates in place in primary storage by October 1, 1979. Later that date was pushed to October 31. It should be noted that only twice in the last five years has there been such a large amount of distillate in storage during this time period.

DOE had each of the 32 refiners meet with representatives of the Energy Regulatory Agency. It is significant that this particular entity was chosen, as that agency also has the power under the Emergency Petroleum Allocation Act to mandate refinery yields. The meetings therefore carried the implicit threat that should the refiners not comply voluntarily, the agency could force them to do so. To quote from the DOE account of the meetings, "DOE discussed with each refiner a theoretical plan by which the industry as a whole, and each refiner could reach the aggregate goal of 240 million barrels. In the DOE theoretical plan, each refiner was asked to compare DOE's theoretical plan with its own production and inventory plans. The inventory for each refiner was placed at nine percent above the refiner's October 1, 1978 inventory level. Nine percent is the amount by which the entire industry would have to increase inventory levels above last year's October 1 level in order to reach the 240 million barrel target."¹²

12. DOE memorandum on middle distillates.

How it was that the Department arrived at the nine percent figure has yet to be determined. However, the refiners took the DOE theoretical plan's goal as an informal mandate, with the threat of a formal mandate lurking in the background.

In an assessment of the middle distillate situation prepared by the DOE, but not made public, the department noted that a number of extraordinary steps would have to be taken by refiners in order to meet their storage quotas, including "...some refiners indicated that they would take steps to build inventories by allocating product. Suppliers are also changing traditional supply arrangements with wholesalers and bulk terminal operators, not offering summer fill programs, and withdrawing from some marketing areas to allow the buildup of distillate inventories."¹³ It is in these actions that the genesis of our current problem is found.

As inventories in primary storage began to swell, they did so to a significant extent at the expense of secondary and tertiary storage. Secondary storage is that at the level of dealer or jobber, and tertiary storage is at the end user level, i.e. the homeowner or farmer. An overview of the present situation indicates that the problem may be far more serious than is realized.

The National Oil Jobbers Council conducted a survey of its members to determine what the level of their stocks was as of June 1, 1979. The results of the survey were startling. They indicated that there was severe shortfall of middle distillates at the secondary and tertiary levels. Specifically, dealers' tanks, which represented 47 million barrels of storage capacity were 29 percent full on June 1, 1979, as compared with being 48 percent full on June 1, 1978. Their customers' tanks, which represent 79 million barrels of storage capacity were 51 percent full on June 1, 1979, as compared with their being 60 percent full on June 1, 1978. In a follow-up survey conducted on the basis of a more limited sample, it was indicated that on September 1, 1979, dealers' tanks were 27 percent full as compared with their being 63 percent full on the same date in 1978, and customers' tanks were 46 percent full as compared with 76 percent the previous year.

According to projections prepared by the House Small Business Committee's Subcommittee on Antitrust, the aggregate shortfall at the secondary and tertiary level could be as much as 40 million barrels.¹⁴ In a memorandum to the Chairman, the committee staff states, "This shortfall at the local levels may equal as much as 21 percent of the total national stock held in primary inventory."¹⁵

13. Ibid.

14. House Small Business Committee Subcommittee on Antitrust.

15. DOE memorandum on gasoline deregulation.

In essence, what has occurred is that the Department of Energy, in its zeal to insure that it could prove that the nation had enough middle distillate to provide for the winter's needs, mandated that the fuel be kept in the only facilities it keeps records on: primary storage tanks. The trouble is that these are not the facilities closest to the customer: the secondary and tertiary levels are, but the Department does not monitor storage at these levels. As a result, their policy has given rise to the paradoxical situation of having enough distillate, but having it in the wrong place, or precisely the type of problem which developed with gasoline allocation. In that instance, the DOE's policies managed to turn a 5 percent crude oil shortage into a 25 percent to 30 percent shortage at the pumps in some areas.

THE NEED FOR ACTION

As the winter months approach, the need for positive action to alleviate the situation becomes increasingly urgent. In several farming regions of the nation, where the winter wheat harvest season begins on October 1, there is already a serious shortage of diesel fuel. In regions where fuel oil is principally moved by barge, supplies must frequently be in place by the end of October, because after that time rivers freeze over and there is no way to move adequate supplies of fuel in by land. Further, the longer the fuel oil sits in tanks in primary storage, the more its price will rise to the customer. There is already some sympathy in the Congress for a plan to place a freeze on the price of home heating oil, even though the increase in its price has nothing to do with the market, but rather is a direct result of the policies of the Department of Energy. Should the price rise much further, the temptation to reimpose price and allocation controls may become overwhelming.

Yet another problem which could surface as a result of the DOE policy is a further aggravation of what already appears to be a tight supply situation for gasoline in the coming spring. To the extent that storage capacity at refineries is filled with middle distillate, gasoline stocks cannot be built up. The early winter months are the time when this traditionally takes place. Should refiners be unable to move supplies of distillate to the secondary and tertiary level until later than usual, it may inhibit their ability to refine gasoline due to a lack of storage capacity. This presents the unpleasant prospect of repeating the very problems which we experienced this spring and summer with gas lines and spot shortages. Worse yet, as refiners moved to attempt to make up for lost time in refining gasoline, yet another distillate shortage could develop in 1980. Our nation could very well find itself lurching from a shortage of gasoline to a shortage of diesel and heating oil and back again repeatedly due solely to a misguided and ill-advised policy of attempting to regulate a market which is best left unregulated. The DOE Office of Competition agrees: "What is at issue is the inference that is drawn from those claims, namely that regulation has succeeded in counteracting or offsetting competitive problems existing in the market.

Not only is this inference not correct, but it can be shown in almost every case that regulation has compounded any problems arising from imperfect market structure."¹⁶

Milton R. Copulos
Policy Analyst

16. DOE memorandum on gasoline deregulation.