24062

UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C.

FOR RELEASE ON DELIVERY
TUESDAY, FEBRUARY 2, 1982

STATEMENT OF
DONALD Z. FORCIER
SENIOR GROUP DIRECTOR
ENERGY AND MINERALS DIVISION
BEFORE THE
JOINT COMMITTEE ON THE STATE'S ECONOMY
CALIFORNIA LEGISLATURE
ON
FEDERAL PREPAREDNESS FOR OIL IMPORT DISRUPTIONS

Mr. Chairman, I appreciate the opportunity to testify on the the Federal Government's Preparedness for Oil Import Disruptions. The General Accounting Office (GAO) has examined different aspects of this subject on numerous occasions since the Arab Oil Embargo of 1973-74. Most recently, this past September GAO issued a report 1/ to the Congress which concluded that:

First, the U.S. Government is almost totally unprepared to deal with significant disruptions in oil imports.

Second, oil import disruptions--such as the 1973 Oil Embargo and the 1979 Iranian Oil Shortfall--pose a significant threat to the National Security, and

---

1/"The United States Remains Unprepared for Oil Import Disruptions" (EMD-81-117, September 29, 1981)

024420 120391

Third, immediate steps can be taken to improve readiness.

We also made several recommendations regarding the steps that could be taken.

OBJECTIVE OF THE STUDY

The basic objectives of the GAO study were to evaluate U.S. preparedness for dealing with oil import disrutpions and to assess alternative approaches to improve preparedness. To do this we focused on a hypothetical shortfall of 3 million barrels per day (MMBD) to the U.S.; net of any International Energy Administration (IEA) commitments.

While this would be a substantial shortfall, it is well within the realm of possibility and doesn't represent a "worst case". In 1980 the U.S. imported about 5 mmbd of crude and product from OPEC countries. In 1981, partly due to the depresssed economy but also due to the drawdown of stocks, the figure is closer to 4 mmbd. Most forecasts that we have seen indicate a level of 4-5 mmbd for the foreseeable future. This is down considerably from the high of over 7 mmbd a few years ago, but nevertheless represents a considerable degree of vulnerability.

In 1979 the U.S. experienced a shortfall of only about 500 mbd, yet we had widespread confusion and dislocation; and, more importantly we experienced a rapid price increase of over 100 percent which has stayed with us. Some analysts believe that there is no urgency. That the world oil market has excess production capacity and there isn't much to worry about. That may, indeed be the situation at the moment, but we must not forget that from 1976 through 1978 we also had a relatively slack world oil market. Yet we didn't take the opportunity to prepare for a disruption. We reduced stock levels (as the industry is once again doing) and paid for it dearly in 1979.

Let met turn now to some of the more specific results of out study.

NATION CANNOT COPE WITH A 3 MMBD SHORTFALL

GAO found that the Nation is grossly unprepared to cope with a three million barrel per day oil shortfall. The table on page 4 of my testimony is an excerpt from the GAO report. It presents GAO's estimates of the near term capability of Federal Government programs to offset a one year, 3 mmbd disruption. The figures

TABLE 1

GAO ESTIMATES OF NEAR TERM CAPABILITY OF FEDERAL GOVERNMENT PROGRAMS TO OFFSET A ONE YEAR, 3 MMBD DISRUPTION

Program or Policy Measure	Oil Offset Capability By End Of 3 Months	6 Months	12 Months
DEMAND RESTRAINT	(MBD)	(MBD)	(MBD)
Minimum Fuel Purchase	Negl.	Negl.	Negl.
Odd/Even Gasoline Purchase	35-70	35-70	35-70
55 MPH Speed Limit Enforcement	30-60	30-60	30-60
Emergency Building Temperature Reductions	80	80	80
Public Information Programs	65-130	65-130	65-130
Subtotal	210-340	210-340	210-340
FUEL SWITCHING			
Oil-to-Gas	50	100-300	300-435*
Oil-to-Coal	--	20	90**
Increased Electricity Production/Transfers	30	145	155***
Increased Use High Sulfur Fuel Oil	5	5	5
Subtotal	85	270-470	550-685
INCREASED OIL SUPPLIES			
Surge Oil Production	Negl.	Negl.	Negl.
Drawdown of Industry-Owned Oil Stocks	275-550	275-550	275-550
SPR Drawdown	0+	0+	0+
Subtotal	275-550	755-550	275-550
TOTAL	570-975	755-1360	1035-1575
(MINUS 3000 MBD SHORTFALL)	(3000)	(3000)	(3000)
NET SHORTFALL TO BE HANDLED BY ALLOCATION CONTROLS OR MARKET MEASURES	(2430-2025)	(2245-1640)	(1965-1425)

*DOE's Office of Policy and Evaluation and AGA estimate maximum potential at 1100-1200 MMBD within one year. We differ because it is not certain that gas supplies and the transportation system would be adequate to meet the maximum switching potential.

**DOE estimates maximum potential at 213. We regard this as too optimistic because it relies substantially on amending legislation and no steps have yet been taken in this direction.

***Reflects DOE's data on the number of coal-fired and nuclear plants near completion as of March 1981. Some plants have already come on line and it is possible that others could be added to an updated list. For details see Vol. II, Chpt. IV, pp. 19-20.

+We assume SPR will not be drawn down except in worst case situations and until the reserve contains about 250 to 500 MMB.

are rough approximations. This lack of precision arises because DOE only has draft plans for many of these measures and programs for effective implementation are not in place. But they are useful for indicating orders of magnitude.

Furthermore, necessary legal authority for some of these programs has expired and the Administration has indicated that it will not seek renewal of such authority. Presumably, if an emergency occurred tomorrow, DOE approval of programs and even a renewal of legal authorities could be secured rather quickly. But that does not mean that effective programs could be quickly put into operation. There is an important difference between authority and capability. Between programs which are merely authorized and between those that are designed, tested and ready to be implemented.

The bottom line is that the U.S. would be luckly to offset one third of the shortfall with demand restraint, fuel switching, and increased oil supply programs. Consequently market measures, (i.e., increased prices) or allocation controls would have to offset the remaining two thirds.

We believe that the figures reported in table 1 are, if anything optimistic because the savings figures presented assume that the programs will be approved and implemented fairly effectively. In fact, it is questionable whether DOE could implement an effective program for drawdown of industry-owned oil stocks, which in Table 1 accounts for the largest estimated oil offset. If DOE could not effectively implement a drawdown program, achieving the estimated savings would rest on the willingness of oil companies to voluntarily support the program.

On the other hand we have assumed that the SPR would not be used until more oil is in storage. While the Department of Energy has not publicly announced or proposed any plans for use of the SPR, many studies of SPR use strategy advocate that a minimum fill be reached before the reserve is drawn down except to meet the most critical needs during a very severe disruption. For example, the National Petroleum Council recommended that about 200 mmb should be held in reserve for such contingencies since the SPR is a one time source of crude which must be replenished. A DOE study prepared in late 1979 indicated that 250 to 550 mmb

should be retained as insurance for "survival uses." 1/ In other words, a "hold card" to be used only as a last resort. We belive the concept of maintaining a minimum reserve for the most severe disruptions is reasonable. Therefore, in evaluating the capability for handling a U.S. shortfall of 3 mmbd, we have proceeded on the premise that the Federal Government would not draw down the SPR except in a worst case disruption or until it reached a size of about 250 to 500 million barrels. Present DOE plans indicate the reserve will reach 250 mmb late this year.

WHAT CAN BE DONE?

In GAO's view the key is commitment. With the exception of the SPR, the Government has paid virtually no attention to providing protection against oil disruptions. A good deal of effort and some progress, has been made towards reducing our longer term dependency on oil imports, but not much towards reducing our vulnerability to the disruptions that could occur in the meantime.

1/"DOE Analysis of the Appropriate Size of Strategic Petroleum Reserve," November 30, 1979.

There has been a great deal said about allowing the market to work and using market forces to balance supply and demand. This may well make sense as a general rule, but we must consider that, under most scenarios, sudden supply disruptions are extraordinary events which are caused by political forces rather than normal market forces. The market doesn't normally deal adequately with political risks. This perhaps is being illustrated at the present time as industry is rapidly reducing its stocks during this soft market.

Even with a program heavily weighted towards market forces there are several things only Government can do including:

--Determining how to use the SPR,

--Removing regulatory constraints to fuel switching and surge production,

--The recycling of tax revenues,

--If necessary, the activation of mandatory demand restraint or allocation programs, and

--The participation in International Energy Administration programs.

In essence, there is a role for Government in dealing with oil disruptions with any type of strategy. Programs should be designed ahead of time. Programs designed in the confusion of a shortage are apt to be much worse than those designed ahead of time. We need programs which are carefully designed, fully tested, and ready for use. We haven't had this. In addition, well designed programs, prepared beforehand, could have an important psychological benefit, both within the U.S. and overseas, to counter panic during a disruption and help to counter price increases.

The GAO report made over 20 specific recommendations to Congress and the Department of Energy in the areas of obtaining additional supplies, fuel switching, demand restraint, and supply allocation. I will touch on just a few.

Additional Supplies

In the area of making additional oil supplies available during an emergency we recommended that serious consideration be given to establishing a private petroleum reserve. Industry-owned oil stocks offer the greatest potential for immediately upgrading the Nation's ability to deal with disruptions. These reserves

easily rival and probably exceed the current size of the Strategic Petroleum Reserve. Our conservative estimate is that petroleum industry stocks could support a daily drawdown rate of about 300 to 600 mbd for as long as a year. This is consistent with estimates that industry reserves have been ranging between 100 and 200 million barrels above previously normal operating levels. Looking to the mid-term, reserves of, say 350 million barrels, could support, if necessary, a draw-down rate of more than 1 million barrels per day for nearly a year. If achieved, this along could offset one-third of a 3 mmbd shortfall.

Among various options to promote building of industry reserves and to ensure that the oil industry maintains high levels of stocks for emergency purposes are: (1) require companies to set aside a certain level of stocks for emergency purposes; (2) provide financial incentives for hlding oil stocks above a certain level; and (3) establish a quasi-public corporation to build and maintain stocks so as to remove their costs from company books and to assure some government control and management of them. GAO has recommended that the Administration decide

which option(s) will best assure the establishment of the private petroleum reserve and, if necessary, seek legislative authority to carry out such option(s). I might add that, at the request of Senator Bradley, GAO is studying this question in more detail and evaluating the various options. We will be issuing a report later this year.

As of January 1982 the Strategic Petroleum Reserve had about 230 million barrels of oil in storage, which could be drawn down at a maximum rate of about 1.7 mmbd for about 3 months--at which point the drawdown rate would decrease until the SPR is exhausted about 3 months later. This represents a major improvement over a year ago but still is a long way from the present goal of establishing a 750 million barrel reserve.

In GAO's view, the Nation's preparedness for dealing with oil supply disruptions is so poor that the SPR should be filled as quickly as practicable and a comprehensive SPR use plan should be developed and integrated with other contingency plans.

Other recommendations in the report in the area of additional supplies include:

--the negotiation of agreements with the Governments of Alaska and Texas, where the greatest potential for surge production exists, to permit such production under certain conditions,

--the approval of legislation providing standby authority for a small amount of surge production at Elk Hills,

--working through the International Energy Agency to get other countries to develop a "true" 90-day reserve at a minimum, and

--the development of an internationally coordinated plan to deal with small but signficant disruptions to counter price increases.

Fuel Switching

In the area of fuel switching, the Department of Energy needs to acquire a better understanding of the role fuel switching can plan in oil disruptions. The potential for oil-to-gas and oil-to-coal switching seems substantial but an assessment of many of the variable affecting switching has not been performed. In particular, DOE has not adequately examined supply, transportation, legal, and regulatory constraints. The Government's information base appears inadequate for designing effective programs in these areas.

Estimates of the fuel switching potential vary widely and are highly speculative. GAO recommends that a better assessment of gas supplies, deliverability, and switching capability be made.

Demand Restraint

In the area of demand restraint, we agree with the principle that the States should have the leading role if demand restraint programs are implemented. Energy consumption patterns vary significantly across the States. Consequently, Federal measures imposed at the National level may have uneven effects on different States. However, we believe the States should be subject to standards similar to those we believe the Federal Government should observe. This means that States should have stand-by programs designed, tested and on-the-shelf ready for implementation. Consequently, we recommended that Congress amend the present law to require the States to submit demand restraint plans for approval before disruptions; and the plans should demonstrate that standby programs exist which could achieve specified results within certain time periods.

We also urged that further consideration be given to designing a standby system of emergency taxes and rebates, and that such plans be coordinated internationally, as a possible means of combating sharp price increases during a disruption.

Allocation of Supplies

In the area of allocation of supplies, we urged the Congress to replace the crude oil and product allocation authority, most of which expired in September 1981, with authority for an improved emergency distribution system. This is a controversial area. Its the qustion of reliance on the market or of government intervention. But, in our view, it doesn't have to be relegated to a question of "doing nothing" or "doing everything." Both extremes have serious flaws. What we urged is the development of a standby allocation system; one which would be as simple as possible yet designed to deal with potentially serious health and safety problems that could arise. We don't advocate that it be implemented quickly. But it seems to us that a standby system should be available. We may find we will want it, if so, its better to have it prepared ahead of time than to have to put it through in the middle of the crisis.

We did urge, however, that widespread price controls and rationing should be avoided if at all possible, on the grounds that price controls are counterproductive and rationing is frought with logistical problems and probably very inefficient.

- - - - -

Mr. Chairman, this represents the general thrust of our report. There are many recommendations. We certainly hope that it will never be necessary to implement all of these programs. But contingency planning means being ready for different possible situations. We feel it is far better to have good programs available, than to wish we had them during a disruption. We haven't talked about the likelihood of a disruption, but we are all aware that the situation throughout the Middle East is highly volatile.

In closing, I would like to enumerate three characteristics which the report identified as necessary for sound contingency programs.

First, is that a contingency measure must have the potential to produce results which are large enough to be worth its cost.

The most apparent benefits, of course, would be producing or saving oil. Other important benefits could be restraining the price hikes which accompany shortfalls or helping counteract the confusion and uncertainty which can cause panic buying, gasoline lines or other serious inconveniences.

Second, that the program be fully developed, tested, and ready for use. While this may seem obvious, it has often been ignored in the past. For example, gasoline allocation authority had existed for six years prior to the Iranian shortfall in 1979. However, that crisis caught the Government by surprise; its efforts to allocate on the basis of inadequate regulations, procedures, and staff were chaotic, despite the fact that the disruption was small.

A third important ingredient is timeliness. Generally, contingency measures must be activated quickly but even more important, planners must know how long it takes to get each program functioning adequately so that the size of the response closely matches the size of the shortfall.

This concludes my prepared statement, Mr. Chairman, I'd be happy to try to answer any questions you may have.