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DOMESTIC REFINERY POLICY—OVERSIGHT

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HEARING BEFORE THE SUBCOMMITTEE ON ENERGY AND POWER OF THE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE HOUSE OF REPRESENTATIVES

NINETY-SIXTH CONGRESS
SECOND SESSION

DECEMBER 17, 1980

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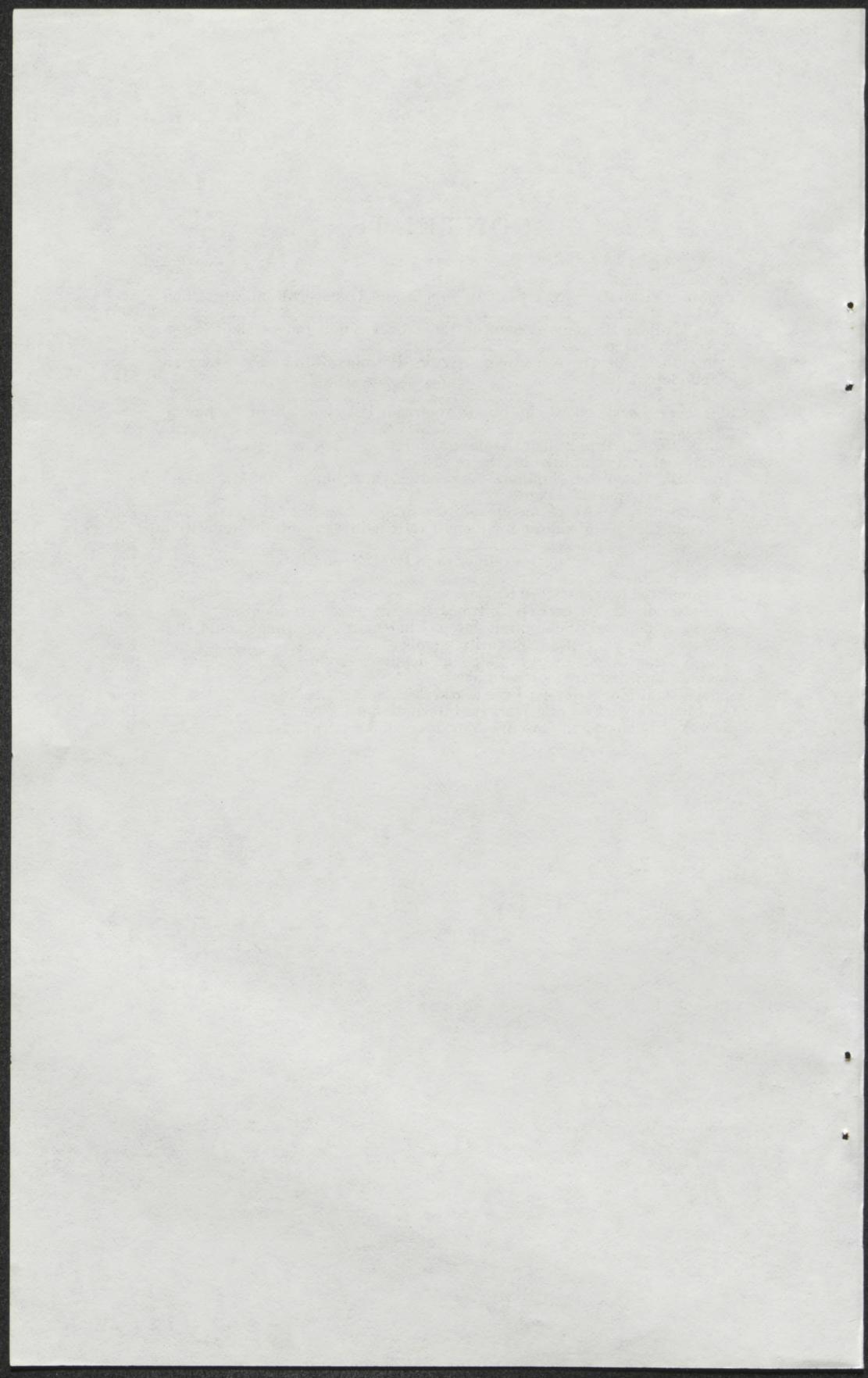
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DOMESTIC REFINERY POLICY—OVERSIGHT

WEDNESDAY, DECEMBER 17, 1980

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENERGY AND POWER,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10 a.m., in room 2123, Rayburn House Office Building, Hon. Philip R. Sharp, presiding (Hon. John D. Dingell, chairman).

Mr. SHARP. The subcommittee will come to order.

I would like to read a statement on behalf of Chairman Dingell who couldn't be with us this morning.

Today's hearing marks the formal commencement of the subcommittee's efforts to develop a rational domestic refinery policy. It is, by now, axiomatic that the future of our domestic refining industry is a matter of extreme national importance.

All Federal Government oil pricing and allocation authority under the Emergency Petroleum Allocation Act of 1973 is scheduled to expire on September 30, 1981. Decontrol could produce profound changes in the oil industry. The possibility that decontrol could occur before the end of September 1981 adds some urgency to the subcommittee's task of examining domestic refinery policy.

The purpose of today's hearing is to examine the future of our domestic refining industry. It is incumbent upon the subcommittee to examine the anticipated effects of decontrol on U.S. refiners. Our ultimate concern is to insure that all oil product markets continue to be served at competitive prices.

I am very much concerned that some major refiners are reported to be considering abandoning traditional product markets in particular geographic areas. Decontrol should not result in American consumers being confronted with product shortages or exorbitantly priced products.

In addition, it must be remembered that legislation directed at the refinery level will also affect marketing sectors of the petroleum industry.

Both the price of imported crude oil and the structure of the world crude oil market have changed dramatically since enactment of the EPAA in 1973. The OPEC countries have successfully wrestled control of the world's crude export market from the multinational oil companies.

As a result, the multinational oil companies make fewer third-party sales. Producer governments manipulate production and receive premiums for new sales contracts. National governments often receive preferred treatment from producer governments. The world oil market has become significantly less predictable. As a

result, domestic refiners of all sizes have experienced difficulty in obtaining crude oil.

I understand that the oil industry is bitterly divided over the decontrol issue. In this connection, I would encourage the industry to attempt to resolve or limit its differences on this divisive issue. In this manner, the number and complexity of the issues to be resolved by the subcommittee may be minimized.

The subcommittee has invited witnesses to appear today who represent diverse perspectives, and we look forward to a stimulating exchange of views from our witnesses.

I am pleased to welcome our first panel, Mr. John F. O'Leary, former Deputy Secretary of Energy, and Dr. John H. Lichtblau, executive director, Petroleum Industry Research Foundation, Inc.

Gentlemen, we are delighted to have you back with us. Both of you have testified on several occasions and Mr. O'Leary on more occasions than can be counted.

We have Mr. O'Leary listed first. If you have a summary of your statement we will be happy to incorporate the full statement in the record.

STATEMENTS OF JOHN F. O'LEARY, WASHINGTON, D.C.; AND JOHN H. LICHTBLAU, EXECUTIVE DIRECTOR, PETROLEUM INDUSTRY RESEARCH FOUNDATION, INC.

Mr. O'LEARY. Thank you very much, Mr. Sharp.

How would you like to proceed, Mr. Chairman? Would you like me to simply read my statement of 5 minutes or summarize? [See p. 7]

Mr. SHARP. I think that would be fine if you could give us a summation or if reading will do the same we would be delighted to have your opening statement.

Mr. O'LEARY. Mr. Chairman, I think that what you are involved in here today is the beginning of a very long and quite contentious course that almost certainly should be settled by this coming fall.

I think that the prospect of going into next winter in the position we find in the world's crude market without some successor to EPAA is too hazardous to be acceptable. Consequently, I think that your investigation of this matter now is very timely because you will find it extremely complex and you will find there will be a lot of heat expended on the subject in the next few months.

Let me tell you what I think are the key elements that you ought to be thinking about as you run through this course.

First of all, we are transiting from a market of growth in petroleum product demand to one of stagnation and perhaps even negative growth. That changes an enormous amount of the potential for the refining industry. A 2- or 3- or 4-percent annual increment demand for products forgives a great deal that is not forgiven in a zero or negative growth environment.

I think also we are entering in an era now which is totally different in kind from the last 30 years or thereabouts which were characterized by chronic crude surpluses pressing on the market.

I think what we will find over the long term is a market which is very tightly geared to demand; one in which we simply don't have available the surpluses constantly on the market that we had over the course of the last 30 years.

I look upon that as really the most important strategic change in the overall market and one that will have massive impacts over the course of the next generation or so.

Then we have to remember that we have had 22 years of deliberate policy aimed at biasing refinery distribution in favor of small refiners. We can't ignore that as we go forward. Some of that biasing has not gone simply to the small refiners as an offset to the very significant advantage of the large companies in the business but has gone in terms of what I characterize as overbias and create a host of small and uneconomic operations the Congress is going to have to deal with.

I reference March 1979 as the beginning of this period, beginning 22 years of a deliberate policy to locate needed refinery capacity in the United States.

There has been an exception to that for residual fuel oil but by and large our policies have encouraged development of needed refinery capacity here. In the obverse they have discouraged product imports ever since the imposition of the mandatory oil import program in the late 1950's.

We have had international trade in petroleum that was dominated primarily by economic and commercial interests. Over the course of the last several years as the host countries have taken over responsibility for marketing, we have seen that transit to a point where increasingly deals are made between countries on a bilateral, government-to-government, basis.

I was startled to see that our imports from both Mexico and Venezuela over the last year have dropped some 30 to 40 percent. That is a result of either conscious or unconscious policy on the part of the exporting nations but the point to note is that it has been accompanied by a time in which both of those nations have made heavy resort to bilateral arrangements.

We find, for example, in the case of Mexico, that arrangements have been entered into with Canada, with France, and Japan, probably with others and much the same pattern has evolved with regard to Venezuelan relationships with Italy and France. The recent bilateral between Mexico and Venezuela that applies to Caribbean nations is another manifestation of this trend.

Indeed, I think that what we will see over the course of the next 5 years is a complete dominance of petroleum trade by government-to-government deals as the old market dominance of the majors lapses.

We have already seen the withdrawal of the position of the majors in many countries. I think we will see it in their last remaining bastion in Saudi Arabia in the course of the next 5 years and this transition will have a profound influence on the refining industry on a global basis.

Those are the principal pressures that are working on the system now.

There is one other that is a result of more or less natural forces that we should take into account and that is declining quality of crudes. We have a perverse system at work. Demand is running increasingly to light products while crude is increasingly heavy. This makes for some major economic pressures on the industry over the next few years.

It seems to me that going from those points we can isolate several issues that ought to be addressed by the Congress over the course of the next few months. The first of those has to do with the real tension between offshore refining and refining in the United States.

I think that we will see increasing pressure on the part of host countries to obtain the value added in downstream operations.

In the course of the next 4 or 5 years, certainly by the first of this decade, there will be tie-in sales. In order to obtain any crude you will have to lift a certain portion of product from the host countries. That is inevitably going to be with us. Over time that will mean that industrial countries that do not produce adequate supplies of their own crude are going to be in the position where they will simply see a significant portion of the refining capacity wither away. It won't be there.

Now, what we will find then in the event of future cutoffs of supply is not the quite difficult and complex situation that we found in the past—and in the past, Mr. Chairman, crude was always available on some terms during the cutoffs that we have experienced in the last few years.

On some terms you could always buy crude and with some penalty you could always run that crude through U.S. refiners.

If a political cessation of oil trade runs not simply to crude but to products as well, it seems to me that we will have added a significant new dimension to oil shortages and one that can compound the very severe difficulties that we have already experienced on the two occasions in this decade when for diverse reasons crude became relatively unavailable to U.S. refiners.

I think this is one of the most significant elements latent in this problem before you. Do we retain the flexibility that we now have by maintaining a strong base of refinery capacity in this United States to survive the cutoff of crude from country A by replacing that crude even at a significant loss of efficiency with a crude from a compound of countries B, C, and D? That is a very pressing problem.

The second has to do with bilateral arrangements. We do not enter into bilateral arrangements in oil. Almost all the other industrial nations do. We are going to find over time that we will simply be left out of the distribution of world crude unless we begin to understand and to work in that particular vineyard.

We are seeing all of our competitors for a fixed or declining supply of crude on the world market resorting to bilaterals. One of the things that requires urgent consideration here is do we forego bilateral government-to-government relations or begin to change conditions in the market?

I think if we continue on our present course we will have to work much harder to attract the volume of crude that is necessary to keep us going and that means that we will have to pay a higher price for it one way or the other.

Then you have always in this matter a very significant question of concentration. We have now a situation in which just a few firms, a handful of the very largest majors first, control the bulk of both domestic and foreign crude. They also as you know, control a very large proportion of domestic gas.

Over the course of the next few years, as we move toward decontrol, their economic position is going to be enormously enhanced and it seems to me that when we note the change in the terms of availability of crude, switching from the point where market was the thing you wanted to have to insure profitability to the point where crude is the thing you want to insure economic viability, we are going to see greater and greater concentration in this industry on a global basis if we permit nature to take its course.

That, of course, brings up the question first of access by nonintegrated refiners to crude during nonemergency periods. Should we have some way to assure through a bias, through a differential tariff or tax treatment that nature does not take this course? Should we intervene in this market in short?

It also brings to the fore the problem of crude access during emergencies. We will almost certainly go into a period in the spring of this coming year in which we will have the classic pattern of crude shortages and bidding up of prices in the crude market.

Do we permit nature to take its course there or intervene in that sort of emergency? It is quite evident if we permit market forces to rule that two things will happen. First, the companies with an assured supply of crude—I have to remind myself constantly that Aramco each day lifts 7 million barrels of oil from Saudi Arabia alone, about 70 percent of that country's production, and equal to all of our production of the lower 48 States before it begins to scramble in the market.

We must, I think, recognize that enormous economic power in our policy. It just provides too much of an advantage through historical strength who are situated in an enormously dominant position.

If we don't recognize it during emergencies, I am sure the other strong middle-sized companies will simply add further fuel to the fire of bidding prices up, a phenomena that we have experienced twice in the last decade.

Customer protection has to be given attention. You referenced in your opening remarks withdrawal of some refiners from selected markets around the country. What do you do to insure customers do have a product available to them at appropriate price levels?

Then, finally, the very small uneconomic refiner issue, which really should be regarded only as a tail and the tip of the tail at that. It is not strategic. It is tactical but it is vexing and one that is going to have to be addressed.

One final set of issues has to do with matching refinery capacity to the changing pattern of demand going from heavy to light and of crude supplies going from light to heavy.

Here we can see an investment of perhaps \$50 billion in the United States alone required over the next 10 years or thereabouts. If we don't make that investment it means we are going to heap additional costs on consumers because we will be faced with less than an optimally configured refinery industry.

As I see the refinery economics of the next decade, unless there is intervention, that investment will not be made and we will have suboptimal refineries here.

Mr. Chairman, this list is not exhaustive but it covers what I regard as the principal set of concerns and issues that will be before you as you begin to wrestle with this problem.

I have views on all of these matters. I haven't incorporated them into today's testimony because I think what we should begin to do now is recognize the issues in the setting in which this problem ought to be addressed and later begin to move toward the development of solutions.

Thank you for this opportunity to appear before you again, Mr. Chairman.

[Mr. O'Leary's prepared statement follows:]

Summary of Testimony of John F. O'Leary
Before the Subcommittee on Energy and Power
of the
Committee on Interstate and Foreign Commerce
of the U. S. House of Representatives
December 17, 1980

Mr. Chairman:

It is a pleasure to appear before you and the other members of your committee this morning. I thought that the most useful thing that I could do in my prepared testimony was to provide a very brief capsulization of the factors that I think should be considered by the Congress in developing future refinery policy. The principal elements that you should keep in mind are:

BACKGROUND

1. Present refinery economy of the United States is a product of:
 - a. Growing requirement for refined products in the United States market over the entire post World War II period.
 - b. More or less chronic crude surpluses on the world market and consequently ready availability of all qualities of crude until 1978.
 - c. 22 years of deliberate intervention to favor small refiners.
 - d. 22 years of a deliberate policy to locate needed refinery capacity in the United States.

- e. Dominance of economic and commercial considerations in shaping international trade in crude petroleum.
 - f. Freedom to locate refineries near markets.
2. The next 20 years will be characterized by:
- a. Negative growth in demand for refined products in the United States.
 - b. The elimination of surpluses in world crude supplies and a consequent chronic tightness in the world crude market.
 - c. Declining quality of crudes on a global basis.
 - d. Increasing pressures by crude producing nations to extend their activities downstream into refining and petrochemical processing.
 - e. Increasing dominance of political consideration (government-to-government arrangements) in shaping international trade in crude and products with consequent reduction in commercial and economic influence on trade.
3. In past period of surpluses, possession of a market position was the controlling element in the ultimate profitability of the production-distribution chain of petroleum related activities. This factor permitted non-integrated refiners to flourish in world in which crude supplies were always available on favorable terms.
4. For the next 20 years, as crude supplies remain in a position of more or less chronic shortage, possession of crude will be the controlling factor in oil industry profitability and non-integrated companies without access on even terms to crude will fair less well than they have until now.

5. A handful of US firms (perhaps the top one-half dozen) have a dominant position in international crude supply and the same handful of firms control a major share of domestic oil and gas reserves.

6. Petroleum supply interruptions will continue to occur with increased frequency and increased severity of impact on US economy.

Given the above, the principal issues before the Congress as it considers refinery policy for the future are:

ISSUES

1. Offshore refining versus refining in the US. Left to its own devices, the crude petroleum producing nations will extend their activities downstream to refining and potentially to transportation and marketing. This could compound the problems associated with our current vulnerability to a crude cutoff, and of course places even greater pressure on non-integrated refiners and marketers. Should this trend be countered?

2. Bilateral arrangements. Should the United States begin to develop a capacity to enter into bilateral arrangements for crude or will we continue to see the United States capacity to acquire crude supplies on a market basis eroded as government-to-government arrangements increasingly dominate the international petroleum market (in the past year the US share of both Mexican and Venezuelan exports has dropped dramatically). Other nations have been able to increase their receipts from these and other destinations because of their ability and willingness to enter into bilateral arrangements.

If the United States continues to forego bilateral transactions, the US will encounter increasing difficulty (and higher costs) in obtaining its share of world crude supplies, and the trend towards concentration of crude supply and refining and distribution activities in a handful of majors will be accentuated.

3. Concentration in the domestic industry. Without some form of intervention, given their crude position both domestically and in the international market, a few very large integrated firms will emerge with even greater dominance than is the case today, as independent, non-integrated refiners and marketers encounter increasing competition from those that control both domestic and foreign crude. Should future refinery policy encourage or discourage this trend?

- a. Crude access by non-integrated refiners during non-emergency periods. In light of the enormous built-in advantage of the handful of integrated producers referenced above, is it desirable to assure continuing viability of non-integrated refiners by developing a program that will assure sharing of crude on a basis other than ownership?
- b. Crude access during supply emergencies. What is the most equitable form of arrangements to assure viability of non-integrated refiners during supply emergencies?
- c. Pressure on spot market. How can bidding pressure on crude spot market be minimized during emergencies?

- d. Customer protection. How can the problem of protecting the interests of customers of non-integrated refiners during supply emergencies be most equitably dealt with?
- e. Very small refinery issue. One of the effects of the entitlements program was to encourage construction of a number of very small refineries whose economic existence depended upon an extreme application of the small refiner bias. Should there be special provision for these refiners in a future program?
4. Refinery upgrading. Statistically, there is adequate refinery capacity to meet US requirements for the foreseeable future. As crude quality worsens, however, there will be a major requirement for investment to upgrade US refineries in order that they can handle heavier crudes and serve a light-product oriented market. Will normal economic forces achieve this upgrading, or should there be some form of intervention to minimize ultimate consumer costs?

Mr. SHARP. Thank you very much, Mr. O'Leary, for laying out the issues as you see them. We will ask you some questions in a moment or two.

I think we would be best served now to turn to Mr. Lichtblau. You may present your testimony as you wish.

STATEMENT OF JOHN H. LICHTBLAU

Mr. LICHTBLAU. Thank you. I do have a statement.

Some of our comments are rather similar and I hope you will not see this as repetitive but rather as strengthening the excellent quality of Mr. O'Leary's paper.

About 9 months from now—or sooner if the incoming administration so decides—U.S. refining industry will undergo a series of major changes under existing legislation: One, all protection against refined products imports based on lower U.S. crude oil costs will end as domestic crude oil prices rise to the world market level and the crude oil cost of U.S. refiners moves accordingly; two, all regulatory advantages of small refineries and certain other companies through preferential access to the benefits of price controlled domestic crude oil will end; three, small and independent refiners will no longer have assured access to controlled domestic crude oil from their historical suppliers, while crude oil suppliers will no longer have legal obligations toward their historical customers; four, small and independent refiners unable to obtain sufficient foreign crude at competitive prices will no longer be able to look to the larger integrated oil companies as a designated supply source

of last resort and; five, all price controls and distribution allocations on gasoline and propane will end.

Since the legislative basis for all the regulations scheduled to end next September 30 are the Emergency Petroleum Allocation Act of 1973 or the Energy Policy and Conservation Act of 1975, the industry has lived long enough under the constraints and benefits of these regulations to have more or less adapted to them. Thus, their expiration will probably bring about structural changes in the U.S. refining industry.

I would like to discuss some of these changes but first I would like to comment briefly on the economic climate in which they are likely to occur.

The domestic petroleum refining industry has been a growth industry from before the end of the last century until 1978. There is now an assumption among a growing number of industry analysts that that year's consumption of 18.8 million barrels a day represented the peak in U.S. oil consumption.

This assumption is not based on the fact that consumption has dropped in 1979 and 1980—such temporary declines have occurred before—but rather on evidence of a structural long term, perhaps irreversible, decline in U.S. oil consumption.

The principal long term reason for this decline is consumer reaction to the price increases since 1973. They have resulted in less use, more efficient utilization and, in some cases, substitution of other energy sources for oil.

Government policy since 1973 has accelerated this trend through appropriate legislation in all three of these areas. The decision to deregulate the prices of all domestic crude oil, old and new, is part of this policy.

There is now a national consensus that the more we can reduce our oil consumption—without constraining economic growth—the better the national interest will be served, since at present or higher rates of consumption we will have to rely to a substantial degree on insecure imported oil.

While no one can argue with the validity of this concept, it does, of course, have potentially negative implications for the industry which manufactures, transports and markets the products whose demand reduction is deemed in the national interest.

An additional problem is that the refining industry's capital investment requirements will not decline in line with its output. There are two reasons for this: a change in the quality of products requirements and a change in the quality of crude oil supplies.

In the 1980's we expect residual fuel oil demand to decline rapidly, middle distillate demand to grow and total gasoline demand to decline moderately but demand for unleaded gasoline to rise significantly. This means that U.S. refiners will have to install equipment to convert residual fuel oil into lighter products and to improve the overall octane number of gasoline.

At the same time, the average crude barrel will be more difficult to process into required products as U.S. crude oil supplies from foreign and domestic sources are becoming heavier and more sulfurous.

Since U.S. refineries are designed to run only about 50 percent medium and high-sulfur crudes, substantial investments will be

required to increase this share in line with expected future crude oil availability.

It is against this background of declining demand and continued high investment requirements that the decontrol effects enumerated earlier will take place. I will now briefly discuss the impact of some of these.

Let me start with import competition. U.S. refiners have been protected from foreign competition since 1959. Until 1973 the instrument of protection was the mandatory oil import program which imposed volume restrictions first on all imported products and since February 1967 on all products other than residual fuel oil.

Since the fall of 1973, lower U.S. crude oil costs have made it largely impossible for foreign refiners to compete in the U.S. market for any product other than residual fuel oil at the East Coast—PAD I. Competition with the latter product was made easier by giving importers into PAD I—and later Michigan—a portion of an entitlement, that is in essence a portion of the difference between the delivered cost of foreign and controlled domestic crude oil.

Currently, domestic crude oil price controls still give refiners a crude cost advantage of about \$3.50 a barrel on light products over foreign refiners and roughly half that much on residual fuel imports into PAD I—and Michigan.

In addition, there are U.S. import duties of 5.25 cents a barrel for heavy fuel, 10.5 cents a barrel for light fuel oil and 52.5 cents for motor fuels.

After complete domestic crude oil price decontrol the only mandatory protection for U.S. refiners will be the products import duties—whose real protection against foreign refiners is about 10 cents a barrel less than the actual duty because of a 10-cent import duty on most crude oil imports.

Thus, the duty has no protective value whatever for products other than gasoline and not much value—1 cent a gallon—for this product.

However, under existing legislation the President has the right to impose import fees, separate from the import duties, on oil imports. In fact, until suspended in April 1979, a fee of 63 cents a barrel was imposed on all refined products and 21 cents a barrel on all crude oil.

The import fees were not made additive to the import duties but were rolled into each other. The President may reimpose the fees at his discretion at the previous or any other level.

If he chooses not to reimpose a fee, an increase in U.S. products imports will certainly take place. But its impact will vary by product and region. The principally affected product will be residual fuel oil and the principally affected region PAD I. Export refiners in Venezuela and the non-U.S. Caribbean islands will be able to compete with residual fuel oil shipped from the U.S. gulf coast to PAD I, since they have somewhat lower operating costs and substantially lower freight costs.

In 1980 the volume of oil affected by this competition would have amounted to about 230,000 barrels a day. Refineries in PAD I

producing residual fuel oil would also be affected by the foreign competition but much less so than the gulf coast plants.

The economic impact of increased imports would be to reduce the profit margins of refineries with significant residual fuel oil yields, to accelerate the trend toward more fuel oil conversion capacity in those U.S. refineries able to build such facilities and to weaken the economic viability of refineries not able to do so. The latter are most likely small plants located at the gulf coast.

From the balance-of-payments point of view a switch in imports from crude oil to residual fuel oil would be desirable, since the cost of the residual product is nearly always below that of the crude oil from which it is refined. From the security-of-supply point of view it might be desirable, since there is a worldwide surplus of residual fuel oil which is expected to remain, so that foreign residual fuel oil may actually be more easily obtainable than foreign crude oil.

It would therefore appear that the principal valid objections to unrestricted imports of residual fuel oil is their likely negative impact on the profitability of gulf coast refineries which produce residual fuel oil, particularly those not in a position to install equipment to convert residual into lighter products.

Gasoline imports would probably not be significantly deterred by the existing import duty. Again, the only potential region for such imports would be PAD I and the principal competition would be with gasoline tanker shipments from the gulf coast which are on the order of 400,000 barrels a day this year.

However, foreign gasoline supplies differ from foreign residual fuel oil supplies in two important characteristics: One, most foreign gasoline is not of the right quality for the U.S. market; and two, there is no foreign gasoline surplus and none is expected.

Thus, the potential for U.S. gasoline imports is quite limited. Nevertheless, in a declining market even a small incremental quantity of foreign gasoline seeking to enter the United States could have a depressing effect on U.S. refinery margins.

The situation is different again for imports of distillate heating oils. Their quality is generally in line with U.S. requirement and foreign supplies of middle distillates are more readily available than gasoline. In fact, PAD I regularly imports about 5 percent of its distillate heating oil requirements during the heating season. About 305,000 barrels a day of middle distillates is shipped to PAD I by tanker from the gulf coast.

Since Caribbean products have a substantial transportation advantage in PAD I over the gulf coast, unrestricted access of foreign middle distillate would have a more significant negative impact than gasoline imports on gulf coast refinery margins and, hence indirectly on refinery margins elsewhere in the country.

Reimposition of the 63 cents a barrel import fee would, of course, reduce this impact, particularly if the 21 cents a barrel import fee on crude oil were to remain suspended.

Given the existing level of foreign crude oil prices, there is no reason for this particular import fee.

An import fee or other effective restriction on the importation of middle distillate products would have a modest positive effect on the U.S. balance of payments, on U.S. refined products self-sufficiency, and on the economic viability of U.S. refiners.

By contrast, unrestricted middle distillate imports would benefit primarily the U.S. consumer, whose cost would be reduced.

Let me now say a word about U.S. product exports about which a whole lot has not been said up to this point.

These have been prohibited, except under special license, since the beginning of domestic crude oil price controls. The reasons are obvious. The crude oil price controls were made for the benefit of U.S. consumers, not foreign ones.

Furthermore, with their relatively low crude costs, U.S. refiners could have probably sold a significant portion of their output abroad in the absence of restrictions, potentially leaving the United States short of products.

However, next October when U.S. and foreign refiners will pay about the same prices for their crude oil, these reasons will no longer be valid.

In the absence of any export restrictions the United States would not become a substantial exporter of refined products, since U.S. refiners have no cost or freight advantage over their foreign competitors. But small amounts of products may be exported under those conditions.

Such exports would increase the opportunities of U.S. refiners for the disposal of their products and, hence, their ability to balance their products output. Export permission might become particularly important for west coast refineries which will likely produce substantially more residual fuel oil than is required in their market region but would find it more difficult, both from a marketing and a transportation cost point of view, to dispose of the excess in other U.S. regions than in the Far East.

Let me turn to the question of access to crude oil after decontrol. There is considerable concern among those U.S. refiners who have access to the domestic crude oil supplies of other companies under existing supplier/purchaser regulations that as they lose this access, they would likely have to go into foreign markets to replace much of it. This concern is understandable.

If the supplier/purchaser regulations ended right now the purchasers would certainly encounter considerable difficulties in replacing their lost crude at competitive prices in the world market. One may hope that by next October the world oil supply situation will have improved.

However, the problem is perceived to be deeper than this. The question has been posed: Can independent refiners obtain adequate volumes of foreign oil under economic terms similar to those of the major international oil companies with whom they must compete?

There is no simple answer to this question. For one thing, in the world oil market upheaval which has occurred over the past 2 years, the majors, as a group, have lost a considerable part of their previous contractual access to OPEC crude oil. Their loss has benefited primarily OPEC's national oil companies which have become the rising stars in the world oil market.

Furthermore, not all majors are equal in access to OPEC oil. In fact, the independent refiners often expressed concern about inability to compete with the majors refers almost entirely to the four Aramco shareholders, as Mr. O'Leary has pointed out.

There is no doubt that in the last 20 months or so, the Aramco companies have had a significant economic advantage over most other oil companies in the form of lower prices for their share of Saudi Arabian oil. Even with the periodic retroactive upward corrections imposed by Saudi Arabia, these companies had access to substantial volumes of oil at a significantly lower price than was generally paid by their competitors for the same quality crude.

However, the price differential between Saudi and other OPEC crude is a short-term policy measure by Saudi Arabia, designed to obtain price moderation from other OPEC members, and is unlikely to be maintained, since it makes no economic or political sense for Saudi Arabia to underprice other OPEC members on a long-term basis. Thus, I think the Aramco companies' price advantage is unlikely to last much longer.

Aramco's security of access to Saudi Arabian oil supplies is much more likely to endure. But this gives its shareholders a real competitive advantage only during periods of sustained market tightness.

It is for such exceptional periods—which, however, have been more frequent than normal market conditions in the last 2 years—that a system will have to be devised to assure all U.S. refiners approximately equal access to available foreign and domestic oil supplies.

This would not only be a matter of equity but also a means to prevent the occurrence of local shortages brought about by uneven distribution of supplies rather than an overall insufficiency.

In other words, there appears to be a need for some form of standby system of crude oil supply allocations to be triggered only by a real or clearly impending supply shortage and to be of defined limited duration. It will not be easy to devise such a trigger. An established mechanism is necessary, however, to avoid ad hoc policies implemented under the market strain of a disruption.

There are several other important aspects of U.S. refining policy such as what, if anything, to do about the small refiners whose preferential entitlement treatment will end with crude oil decontrol and whether to give tax or other incentives to U.S. refiners for upgrading their plants to produce less fuel oil and to process more heavy, sour crude oil. I am not commenting on these matters so as to stay within my allotted time. But I would be glad to answer any questions regarding them.

Mr. SHARP. Thank you very much, Mr. Lichtblau. We will now take questions for the panel. I will limit the questions to 5 minutes.

Mr. Ottinger.

Mr. OTTINGER. Thank you, Mr. Chairman. It is good to see you again, Mr. O'Leary.

What do you think the possibilities of your recommendations would be with respect to, first, an international arrangement for purchasing and allocating oil? It seems that the European countries and Japan should not compete against each other to drive these prices up to the disadvantage of everybody.

To what extent do you think we within this country should try to establish some international purchasing authority?

Mr. O'LEARY. I don't think we can establish a counter cartel among purchasers that will be effective, Mr. Ottinger.

I was privy in some discussions in the spring of 1979 between principal importing countries and I think as a practical matter their interests are so diverse and their systems so diverse that they are not at least at this point willing to substitute the thing they know, essentially a market-directed sort of oil market that is now becoming bilaterally oriented for a multilateral kind of arrangement.

I think that there is the possibility that the world situation could become so extreme that some nations would look upon that as a very useful sort of device. I suspect the French, among others, would but, by and large, there is at least, as of now, no real disposition on the part of the members of the International Energy Agreement to enter into a counter cartel.

With regard to domestic buying, I really think that the most useful thing we can do here is to see if we can build on the existing system and not simply throw it away.

I mentioned one aspect of Aramco's dominance in the OPEC market, 7 million out of a total of perhaps 25 million. That is an enormous asset to us that they still have that sort of position and are still able, without a group of intervening middlemen, to command that volume of crude.

There are some negative aspects but by and large I would regard it as an asset.

To simply tear that up and replace it with a bureaucracy would, I think, not be a useful instrument. However, I can see some virtue to going at least as far as Mr. Lichtblau has recommended in providing some means where Government does intervene to temper distribution within the market.

Mr. OTTINGER. You are recommending, I take it, that our response to this world situation is to out-scramper the Europeans and Japanese to make arrangements on a bilateral basis with suppliers.

Would that be done on the basis of some kind of Government purchase?

Mr. O'LEARY. No.

Mr. OTTINGER. Or encouragement of the existing companies to make this kind of arrangement?

Mr. O'LEARY. I don't think so, Mr. Ottinger. The sorts of things that we found where we have entered into arrangements that you could regard as bilateral roughly are really matters that are reciprocal in nature, appropriate to our Government. We have said to the Soviets in wheat trade, we have laid down the conditions on a bilateral basis for their access to U.S. market without at all dictating from whom they purchase their wheat.

It seems to me that sort of precedent has utility here. If we were, for example, to begin to think in terms of a development of the enormous resources of heavy oils in Latin America, and ask ourselves would it be valuable to us if they were developed, I think the answer is clearly "Yes", it would be enormously valuable if we could influence positively the timetable for those developments.

Do we want to get in a situation where we are a party to that development? I suspect that would be resented by the citizens of the host countries. Can we make a useful contribution here?

I think the answer is "Yes", by providing a market of last resort.

One of the concerns on the timetable of development of those resources is the potential of a bad market period. Now, conventional oil will be the highest cost element of the crude market. What do you do in a case of depressed demand?

It seems to me that the internal position of the U.S. Government where we provide certain market guarantees would come under the heading of a bilateral arrangement with those supplying nations and would not require us to get into the entrails of day-to-day petroleum trade in any fashion.

Mr. OTTINGER. You are not suggesting that we go down to Mexico and see if we can contract for a long-term supply of oil from Mexico at a price above the current market?

Mr. O'LEARY. No, I am not at all. It seems to me what you might say to yourself is are there ways in which you can affect, influence by market guarantees the Mexican development timetable? Are they slowing down because they are concerned with regard to the placement of their crude?

Let me tell you what I regard as the core problem we are dealing with. It seems to me it is reliance on oil from the Middle East an area that, regardless of the bona fides of the governments involved, is, as it comes out of the colonial era, historically unstable and will be unstable for many years as we were, as we came out of our colonial era.

It is a historical truism, I think, that when colonial governments recede, the former colonies have a very long period in which they establish their own identities.

Because 30 percent of the world's crude comes from that part of the world and that part of the world does have the sort of upheavals we are experiencing today—and will continue to have those—we will see periods, I think, with the frequency of every 5 years or so in which supplies will be jeopardized, prices will run up and agony will be felt by all the rest of the world. That is the real problem.

The real solution to that, Mr. Chairman, is get to the point where the predictable upheavals in that part of the world no longer have the potential for inflicting agony on the remainder of the world.

It would be, in my judgment, extraordinarily useful if the Mexican Government were to say as a result of something that we did perhaps in the immigrant labor line that they would expand their otherwise prevailing timetable for crude production by a million barrels a day by 1980-X and ship it anywhere in the world.

What we will have done is created an additional element of diversity in the world market and reduced thereby by a significant amount the capacity of the predictable upheaval in the Middle East to inflict pain on the remainder of the world.

That is the sort of thing we can do, by injecting bilateralism into these arrangements. Not the narrow "we will trade you our steel for your oil." I don't think that will work in this economy.

We will have to choose the instrument to provide the steel and receive the oil and we have never done that successfully. If we were to say what can we do for Colombian coal development, what can we do to stimulate hydro development in Brazil which, again, would provide diversity in the world's energy supply, it seems to

me we would begin on a bilateral basis to make a very significant and useful contribution to reducing the potential for damage from the Middle East.

Mr. OTTINGER. Our time is limited but I would like your advice on one other aspect of this. There are so many things in this complex area that certainly need examination. What is your advice with respect to keeping some kind of standby mechanism in place, given the Middle East being so unstable and the likelihood of there being major disruptions?

As you indicated, it seems to me that if we dismantle the apparatus, it would take new legislation to reestablish it, and it could cause us grave problems in an emergency.

Mr. O'LEARY. Mr. Ottinger, I think we ought to have standby capacity to deal with an emergency. I mentioned in my opening remarks I thought the thought of going past October in the world in which we live without the capacity to deal on virtually any terms that we chose with an emergency was in my judgment, very bad policy.

I think we ought to retain our capacity to deal effectively with a very, very unstable world crude equation.

Mr. OTTINGER. Mr. Lichtblau, is that also your view?

Mr. LICHTBLAU. Yes, definitely. I think it is most advisable. I think there is no one who would argue we don't need a standby system if and when we abolish the system that exists now. Market forces can only work in a normal market. If you have a sudden interruption you cease to have a normal market and in a sudden interruption something else has to come in, otherwise, you create chaos.

We have to have some form of crisis management. Our threat in the next 10 years will not be a general resource shortage. There will be periods when oil will be in surplus throughout this time but they will be replaced by periods when we will have a crisis.

The important thing is to limit the impact of the crisis. If we could have done this in 1979, oil prices today would be substantially lower than they are because it was in response to the crisis and to our inability to deal with it that prices were pushed up the way they were.

If we can manage a crisis, if we can have a standby system, if we can have storage for emergency purposes, if all of these things exist we might get through the next one without creating the kind of chaos we did last time. Hopefully, we are doing this now.

We have a potential shortage now because of the Iranian/Iraqi war, and so far there has not been any substantial upheaval in the world market but this could change any moment.

Mr. OTTINGER. Isn't that just because we are using up our capacity to respond to future crises that the world is drawing down its very large inventories?

Mr. LICHTBLAU. Yes, but that is what inventories are for and especially when we had excess inventories at the beginning of the war. They are being drawn down. At the same time we are lucky and unlucky that oil demand happens to be declining on a global basis—lucky because it helps our supply and demand and unlucky because it is a function of low economic activity.

There are recessions in a number of countries. This is the reason why our oil demand is lower. So it isn't all a very positive fact but in this situation at this moment it is very useful. In 1979 and in 1973 we had a rapidly growing demand at the time the interruption broke out.

Mr. OTTINGER. Thank you.

Mr. SHARP. Gentlemen, Mr. Ottinger asked the central question which is what we should do to have something in place when the EPAA expires in September of next year.

My second question, therefore, is given the difficulty we have in dealing with lots of issues in the Government here in the Congress, can you help us to focus on what critical things should be done now and in the next 6 months in preparation for this expiration of EPAA?

Which of the issues that you have talked about would you say it is imperative that we focus on and have some policy in place that we should be working on?

Mr. O'Leary, do you want to start on that?

Mr. O'LEARY. I think the first thing you have to be prepared to deal with is the not quite emergency, the shoulder of the emergency period in which we find ourselves now.

The Department of Energy has recently exercised again the buy-sell program and I think they have done it with a good bit of wisdom. Had they not done it there would have been severe damage to the refiner or severe upward pressure on the spot market. The cycle here that we ought to do our best to break is one of bidding up the price of crude \$1 or \$2 at a time.

The ingredients for that are all present today. I suspect what we will find is that stocks will not go into a dip for crude to levels that we have regarded heretofore as normal.

Let me give you the homely analog of your reaction or your wife's reaction if you were to go to the grocery store and find there is always flour on the shelves and then the next year go there and find that only half of the time is there adequate flour in the shelves.

What you tend to do is stock additional flour. What the majors and others are continuing to do in today's world is stock additional crude.

I think we will find at stock levels well above the band that has heretofore been regarded as normal there will be unwillingness on the part of the larger refiners to run crude and sell and distribute product and we will begin to see substantial pressures on the market.

That, it seems to me, is something we can look forward to in March or April of this year and we ought to be capable of dealing with that sensibly should it not occur then but rather in the fall of this year.

It could be that sort of timetable will be postponed until next winter's heating season.

Mr. SHARP. Do you mean by exercise of various departmental authorities' direct action?

Mr. O'LEARY. The exercise of the authorities that are now in EPAA, Mr. Lichtblau and I are making a distinction in our dealing with this. He is saying, and I think in answer to Mr. Ottinger's

question, we should be prepared to operate during an emergency and I think we also ought to be prepared to operate if that is our will during periods that are on the shoulders of an emergency or preemergency action.

I think that is imperative that we put that mechanism in place. That, indeed, is the area in which I suspect you will have the greatest debate because really it cuts to the heart of intervention or nonintervention in nonemergency periods. That is really the issue.

Are you willing to permit nature to take its course? I think if we do we are going to get these effects. First of all, additional concentration in nonemergency periods quite clearly.

The second thing, refiner capacity will tend to migrate outside the United States offshore much more rapidly on a hands off policy more rapidly than if we were to intervene. But the first that is going to show up very rapidly is do we or do we not intervene in this market in nonemergency periods?

Mr. SHARP. So if I understand the result of what you are saying is we have to keep the mechanism in place. We have to have day-to-day monitoring of what is going on in order to deal with what are not immediately apparent emergency situations so they don't become emergency situations and we have to have a department that is capable of exercising authority to insist on enforcing the basic authorities that are there now.

Mr. O'LEARY. Let me give you a possible outcome in the next 2 or 3 years in nonemergency periods. Let's say we get over the present difficulty and don't have another until the late 1980's. What we will see is the continuation of the bilateral trend by the Governments of Venezuela and Mexico—two very important governments to us.

That means that the area where many of our intermediate refiners have drawn their crude will disappear and go into French refineries or Canadian or what have you—Japanese.

What that means in turn is that the companies that do control crude the very, very large companies—I am not talking about the classical 32 but 6 or 8 or 10 at the top of the heap that control the bulk of the Aramco and also have a very strong position in other OSP, official selling price crude—they are going to have to make up the deficit to keep the U.S products supplies in some sort of balance. That will be their crude.

They have gone out of the third party market, as you pointed out in your opening statement. They will simply say, if Venezuela bilaterals lead to more crude going into France, or Great Britain, then less of Exxon's Aramco crude will go into those two markets, a little more will come here. More concentration.

They will be able to handle it in their own refineries or because they have a very broad net of interests they have to affect, it may be that they will determine that in order to keep their favorite position on OSP, they would be placed to build a refinery in the crude producing country and bring the product here.

This is the world that I think we have to be prepared to deal with as we go from a chronic surplus of crude where market control was the determinant of profitability to a point of more or

less chronic shortages of crude where crude control is the determinant of profitability and viability.

Mr. SHARP. Let me just clear my mind. If I have read what you are saying correctly, we need to have in place a policy, with some modifications, but much as it is now. We do have to have in place, authorities of EPAA and they may not be exercised on a very regular basis.

Mr. O'LEARY. I am saying with the consequences of a nonemergency, nonintervention program, then you don't need any standby mechanism. If on the other hand you say what I would like to have is the same players playing 10 years from now, so we are really importing as we are now and have that flexibility, which I think is strategic, then you must intervene.

Mr. SHARP. You are presuming that you may need intervention on product, as well as crude?

Mr. O'LEARY. That is a totally different set of contributions. You will recall that in the spring of 1979, we had the option, as I think I have gone over with you, of extending control of products. In that sort of emergency, we didn't choose to extend that option. It really takes you into a whole brand new and enormously complex allocation problem.

If, however, you are content to have three-quarters of a loaf, you can achieve that by manifesting control at the crude level of the business.

Mr. SHARP. If I read into what you are saying, you think it may be wise to have those legal authorities available, though it may not be wise to exercise them except in the most extreme circumstances?

Mr. O'LEARY. Indeed. I think the fact that we had during the spring of 1979, the capacity to influence fuel markets, was extremely useful in our discussions with the companies. By all means, you should have that tool in their hands. I would simply counsel the person with that tool to be very, very careful.

Mr. SHARP. Mr. Lichtblau.

Mr. LICHTBLAU. There are some aspects of EPAA which are counterproductive in a crisis or pending crisis and some that need to be maintained during a crisis. If you are in a crisis or one that is pending, I agree with Mr. O'Leary—providing you can recognize it is an impending crisis and not just a general feeling that something will happen. In that situation, there are certain aspects that are not desirable and some that are.

For instance, we may want to do away with price controls because price controls are obviously not all that desirable. You will get slightly less demand and slightly more supply. If you talk about 200,000 or 300,000 barrels of oil a day being saved, that is not an insignificant amount.

On the other hand, the redistributive features of EPAA may have to be kept because you may need them. You can't bring them back if there is no legislative basis for it. If there is a shortage, you may need the buy-sell program. You may have to use it. If it is no longer in existence, it may take too long to bring it back.

So what I am talking about is a standby program that could come out of the existing legislation. You keep this legislation and if needed, you use it instantaneously.

There may be a problem within 6 to 8 weeks—I am not predicting, but the situation is precarious. So if that is the case, you can't, as I said earlier, just rely on the market mechanism to bring in enough oil because we will have a repetition of what we had in 1979. Spot prices would rise, and that could bring up the entire level of prices.

There is no functional relationship between the official sales prices by OPEC and the spot prices, but if OPEC countries want to, they can use the spot prices as an indicator as to how high the market can go and they have done so on occasions in the past. So you will need to maintain part of the system.

It would be useful to have stocks available to be used for emergencies. It would have been very useful if we had oil in the ground that could be withdrawn. We don't. For whatever reasons, we didn't get to filling the reserve. It is regrettable because that oil was available in 1978 and again in the first 9 months of 1980 at relatively low prices but the bureaucracy was not in a position to take advantage of it.

If we are to have a reserve, perhaps we should have a different system. Perhaps we should ask the companies to carry products in excess of their requirements and give some tax or other incentive to do this. Our Government-run oil storage program hasn't worked very well and perhaps that is a structural problem, not just a management problem.

Mr. SHARP. It is my understanding that some of the other countries do stockpiling, I think they have run into similar types of problems although they are in a better position than we are in terms of government stockpiling.

Mr. LICHTBLAU. But the stocks are held by private companies and the companies are in a better position to obtain these stocks.

Mr. SHARP. Well, yes.

Thank you very much. We will undoubtedly be calling on you from time to time as this committee has in the past. We appreciate your testimony today. Thank you very much.

Our next panel includes Robert Yancey, president, Ashland Oil Inc., Victor G. Beghini, vice president for supply and transportation, Marathon Oil Co., and Lawrence R. Steenberg, board chairman, American Petroleum Refiners Association.

STATEMENTS OF ROBERT E. YANCY, PRESIDENT, ASHLAND OIL, INC.; VICTOR G. BEGHINI, VICE PRESIDENT, SUPPLY AND TRANSPORTATION, MARATHON OIL CO.; AND LARRY STEENBERG, BOARD CHAIRMAN, AMERICAN PETROLEUM REFINERS ASSOCIATION

Mr. SHARP. If you would make yourselves known for the record as you testify, we will appreciate it. Then we will have questions for the panel.

Mr. Yancey, if you will begin, please.

Mr. YANCEY. Mr. Chairman, I am Bob Yancey, president of Ashland Oil Co. It is always a pleasure to appear before this committee. I will not read my entire statement, I will try to summarize. [See p. 29]

It is always a pleasure for me to appear before this distinguished subcommittee to present views on the domestic petroleum industry

from the perception of a large independent refiner. I especially welcome the opportunity because I know that you are knowledgeable about our industry, and receptive to the special problems of certain segments. You are aware that the industry is not monolithic, and programs or policies that may seem favorable to the industry as a whole might be particularly damaging to some segments. You also already appreciate the important role played by a healthy domestic refining industry in civil defense and national security. Your awareness makes the task of offering testimony on the issues facing our industry much easier.

I think it very timely to start these hearings. The industry is in somewhat of a turmoil because of crude supply. The spot crude price has gone up substantially since the Iraq-Iran war started. Our advisors tell us that the situation is much more dangerous than we are recognizing here in the United States and as the war goes on, the timetable for more crude flowing out of that area of course is pushed back. Consequently, those of us who are short of crude are faced with either reducing runs or chasing the spot price up.

I might say this, that I think the spot price increases in the last two instances have been caused primarily by a few major oil companies and Japan. I think the record will show that.

My testimony today is for Ashland Oil. I want to make that clear. Ashland is a member of an organization called CEACO that was formed by 14 large independent refining companies which represent over 1 million barrels a day. The smallest refiner produces about 40,000 barrels a day and Ashland happens to be the largest. CEACO covers a geographic area throughout most of the United States—most of it is concentrated away from the gulf coast.

I guess I have been before many panels and have discussed many problems that have been caused by Government policies which somehow or another have gone not the way they were supposed to go. These include price control regulations, lead phasedown in gasoline, allocation policies, Clean Air Act provisions, and the like. But the single biggest problem that any refiner faces today—while politically associated—is not caused primarily by U.S. Government policies, but by an international cartel. That problem is, of course, access to adequate crude oil supplies at equitable prices. That will be the main issue when you come around to your determinations. Any Government policy should be to maintain an efficient refining capacity throughout the United States.

Indeed, I think Congress recognized that in establishing the strategic storage reserve. They recognized that to feed those refineries they need reserves, and the refineries should be dispersed throughout the whole United States.

We put some figures together that show that over 70 percent of the total U.S. refining capacity is concentrated along our coasts. We think that is strategically not good. In a lot of instances—and in our area—one of the major oil companies is pulling out of marketing—we have seen that happen with several areas.

In West Virginia, we found we were the only ones still supplying kerosene in the whole area. When State officials heard we were going out of that business, there was panic. We are still in there.

The U.S. refining capacity is undoubtedly the most efficient refining capacity in the world, the plants are more complex and versatile than anywhere else. We already squeeze more products out of a barrel of crude than most offshore refiners.

Crude oil supplies, in this Nation and abroad, are dwindling and the quality is getting worse. That means it is getting higher in sulfur and lower in gravity, which means it will be more difficult to get useable light products out of a barrel of crude.

I don't think it takes a special incentive to cause the refining industry to redo their plants and retrofit them to handle the heavy crude, but industry as a whole needs a stimulus. This can be achieved through special tax treatment, but I don't think this industry should ask for any special treatment over any other industry.

It is true, however, that once decontrol is over, the U.S. refineries will not be competitive with foreign refineries that have all the complex equipment that some have.

Because of the product mix the foreign refineries normally produce, they will not be able to make too large quantities of petrochemical feedstocks and other light materials. But we do need to put on notice to the world, that Congress will act if there is a threat to our domestic refining capacity. I don't think we need those controls just yet.

As I said, the most important problem, and all the others are dwarfed by it, is that of crude oil availability. We need to make sizable investments in retrofitting our refineries but no one, even with tax incentives, will make these investments if he is not assured of some quantity of available crude.

I think Ashland Oil is a good example of this. We spend huge amounts of money in our refineries each year. We likewise spend a lot of time and a lot of capital in research. We have this year announced the construction of what we call a reduced crude converter. This takes the heavy end of the barrel and makes about 20 percent more lighter products. I think this is the direction we want to go.

Just last night we had a ribbon cutting ceremony. We finally got the permits to build these facilities. That is another area someone needs to address himself to. Permitting for new construction, for steel mills or whatever, needs to be gotten in hand and speeded up without any danger of destroying the environment. We did have complete cooperation in this endeavor and we have those permits.

Ashland's refining capacity is about 450,000 barrels a day. In order to supply crude we have purchasing people traveling throughout the world. All of our purchases, with the exception of domestic crude, is made primarily from the national oil companies of producing countries.

The crude supply situation has changed dramatically over the last 2 or 3 years. The national oil companies are making more and more country-to-country deals, thereby diminishing the amount of crude available to others. In many instances it is not possible to make a long-term crude commitment. Our company for instance is completing a deal in Saudi Arabia. We get some crude out of that, the only way we can get crude is to commit capital. Other coun-

tries are asking us to go in on a production basis or we will not get a contract.

Many of the producing countries are backing out of contract crude and increasing amounts are finding their way into the spot market. We long ago learned we cannot rely on purchases from any major oil company. Our contract supplies are very precarious because we have interruptions such as recently in Mexico. We purchase 90,000 barrels per day from that country which was just cut in half this month. We were not just singled out, everyone was cut. There are such things that interrupt the crude oil supply, and nothing to fall back on.

The main problem we are having is that our crude costs are exceedingly high compared to the rest of the industry. We have not bought any spot crude and we do not intend to, but we find our crude mixes much higher cost than the domestic crudes that are fed into the system.

The fact that product prices do not reflect crude oil costs causes us to have major concern. We feel the integrated major oil companies are once again subsidizing their refining and marketing operations via crude oil profits. This is particularly likely with the huge profits now being realized by producing companies from the decontrol of domestic crude. Some functional accounting should be mandatory so that nonintegrated companies—such as those in only refining and marketing, which serve an important role in supplying product to this Nation—can compete on nearly equal footing. We do not object to the crude oil profits, so long as they are not used to subsidize downstream operations.

This is apparent from many articles available, annual reports, and so forth. Most of the majors try to avoid reporting functional types of operations. Some are starting, and I think the accounting laws are gradually moving toward that direction. In any publication written on a major oil company, they talk about improving their downstream efficiency and cutting the losses. That is telling me that they are not getting their money out of refining and marketing, but are subsidizing their refining and marketing.

Another thing that gives me great concern is the drive by the major companies, with large bank accounts, to buy out or make drilling commitments and receive a call on new crude oil discoveries, that is, Shell/Beldridge, \$3.6 billion; Sun/Texas Pacific, \$2.3 billion; Mobil/TransOcean, \$740 million; Getty/Reserve, \$628 million; Sohio/Webb Resources, Mobil/General Crude, Phillips/Anschutz, 80 million acres; Amoco/Union Pacific acreage deal, ARCO/Cheyenne Tribe, 455,000 acre deal; Texaco/Mesa drilling fund and others that are less in magnitude. Millions of acres are being removed from areas where we and other independent refiners now purchase domestic crude oil.

I might also mention that we and other independents keep crude oil purchasing people in most of these areas, so we are being blocked out from buying crude because the larger producers are making commitments with the larger oil companies who are putting up the money.

We feel that our continued existence should be fully justified by our efficiency. I have long said we could spot the majors 50 cents/barrel in feedstock costs, and still whip them in the marketplace.

But crude short refiners cannot afford to pay spot prices for crude oil at \$40 to \$45 per barrel, while the majors buy at contract prices of \$30 to \$35. Yet that is the situation which exists today.

In truth, independents are disadvantaged on the international and domestic crude oil markets in times of tight supply. Major companies control much of the domestic production—either through ownership of the crude or the gathering systems. Internationally, the majors have long associations with the producing countries, and hence longstanding contracts even where their former producing properties have been nationalized. Independents can get only short-term contracts, often with quarterly price re-openers, which are often aborted unilaterally by the producing country.

It is a myth—perpetuated largely by the majors who control the crude—that there can and will be a free, workable market for crude oil, capable of self-allocation, once decontrol is accomplished. There has not been a free market in crude oil for years, and there is not likely ever to be one again. Crude oil today is a political instrument rather than an economic commodity. Crude markets are highly politicized and controlled by governments with varying political objectives on which crude oil is used as a lever. Pure economics is not their primary motivating force.

We must recognize all these factors if we are to maintain a viable domestic petroleum industry relatively free from political blackmail. The U.S. Government must take action to restore some semblance of a free market that international politics has undermined. We have an International Energy Agency agreement which requires sharing of crude oil among nations in times of shortage, in order to assure that no nation goes without. The program is designed to prevent disproportionate access to scarce supplies by the wealthy nations, who can bid up the price. We cannot afford to do less domestically. In order to encourage the investments needed, and to assure continued operation of the widely dispersed, efficient domestic refineries needed for national security, we need a program which allocates crude oil domestically in shortage situations.

Unless there is some form of allocation in the U.S. market it is obvious spot prices of foreign crude will continue to increase especially during times of shortages. In order for crude deficient refiners to supply customers who are totally dependent on them in isolated markets, they will be forced to go to the spot market and bid up crude prices even though in many cases they will not be successful in acquiring the crude. Since no company in a tight market is willing to relinquish supply, the exporting countries will take full advantage of the fact there are many frantic buyers trying to secure supply. As we all know, the spot market encourages producing countries to increase their contracted prices in order to obtain so-called true value of their crude which is verified in the spot market. In our opinion world crude prices today would be lower if a portion of the lower cost contracted crude had been allocated especially during times of shortages.

Such a program might have participation criteria based on efficiency or complexity to prevent further construction or continued operation of the small "tea kettles" which proliferated under favorable controls during the last few years.

It could have triggers measured by differentials between spot and contract prices on the international markets, or by volume shortages. Any participant could be a buyer or seller, depending upon its particular supply situation compared to the national average. Selling prices could be set high enough to encourage all refiners to seek their own supply as quickly as the international situation allows.

Such a program should not be difficult to work out mechanically. Given assurances that they will not lose more than a proportionate volume of supply in periods of shortage, refiners will not hesitate to make the necessary investments, and we can maintain a healthy refining industry so necessary to our Nation's security. Absent such a program, our most efficient refining capacity may fall by the wayside, with our national defense posture sorely jeopardized.

Following the Arab embargo in 1973, the DOE had a crude-sharing program. When crude became more available, we set out to make our own contracts. In 1977 we were eliminated from that buy/sell program as were all large independents over 175,000 barrels a day. An extension, of present regulations will not get the job done as far as our segment of the business is concerned. In fact, we think eliminating controls the way they are now would be the thing to do and implement another program fair to everybody. We will be looking at some of those things.

[Testimony resumes on p. 38.]

Mr. Yancey's prepared statement follows:]

REMARKS BY

ROBERT E. YANCEY
PRESIDENT, ASHLAND OIL, INC.

HEARING BEFORE ENERGY AND POWER SUBCOMMITTEE
DECEMBER 17, 1980

It is always a pleasure for me to appear before this distinguished subcommittee to present views on the domestic petroleum industry from the perception of a large independent refiner. I especially welcome the opportunity because I know that you are knowledgeable about our industry, and receptive to the special problems of certain segments. You are aware that the industry is not monolithic, and programs or policies that may seem favorable to the industry as a whole might be particularly damaging to some segments. You also already appreciate the important role played by a healthy domestic refining industry in civil defense and national security. Your awareness makes the task of offering testimony on the issues facing our industry much easier.

My testimony is on behalf of Ashland Oil, Inc. and not CEACO, of which we are members. CEACO is comprised of 14 large independent refiners, with over one million barrels a day of efficient crude oil processing capacity, and was formed for the sole objective of obtaining equal access to crude oil.

As I have told you before, many of the problems refiners face today can be directly attributed to well intentioned government policies which have somehow gone awry. These include price control regulations, lead phasedown

in gasoline, allocation policies, Clean Air Act provisions, and the like. But the single biggest problem that any refiner faces today--while politically associated--is not caused primarily by U. S. Government policies, but by an international cartel. That problem is, of course, access to adequate crude oil supplies at equitable prices. Unfortunately, our own government has chosen thus far to ignore that critical issue and its implications.

Future government refining policies should be aimed at the preservation of a healthy refining industry, with maintenance of efficient, strategically dispersed refining capacity adequate to meet this nation's needs in times of an emergency.

Indeed, the Congress properly recognized that the nation's defenses required the stockpiling of a Strategic Petroleum Reserve--crude oil that will be stored in various areas for emergency use. Frank Zarb once referred to the establishment of SPR as the single most important accomplishment of DOE. But to be of any utility, the SPR assumes the availability of domestic refineries capable of turning this crude oil into the gasoline, distillate, jet fuel, and other refined petroleum products needed to keep our economy moving--in peace or war.

Without a doubt, the U. S. refining industry is the most efficient in the world. On the whole, the U. S. plants are more complex, and more versatile, than any anywhere. We already squeeze more high value products from a barrel of crude oil than newer refineries offshore and overseas.

But we need to do better. Crude oil supplies in this nation and abroad are dwindling, and the quality is worsening. So we need to build units which will make even greater quantities of useable products from increasingly heavier, higher sulfur crudes. I don't feel that the petroleum industry needs any special incentives to do this, but industry as a whole needs some sort of economic stimulus to reindustrialize America. This can be accomplished through appropriate changes in the depreciation rates, or through special tax treatment. Whatever mechanism is chosen to get investment in our economy moving forward again should be adequate for the refining industry, without the need for any special favors in its behalf for any segment of the industry.

There can be little doubt that U. S. policies have created an environment whereby domestic refineries are unable to compete on an equal footing with overseas plants. U. S. plants have higher costs due to higher tax rates, higher construction and labor costs, environmental restrictions, other regulatory compliance requirements such as OSHA, higher transportation costs due to Jones Act provisions, etc. To date, these competitive handicaps placed on the domestic industry have been more than offset by lower priced domestic crude resulting from price controls. When those controls expire in 1981, and domestic crude prices reach parity with foreign, there will be left a huge operating cost advantage for foreign refineries.

With the decrease in petroleum demand worldwide, there is presently a surplus of refining capacity abroad as well as domestically. Foreign refineries are operating at an even lower percentage of capacity than the average here at home. Once decontrol is accomplished, only the fact that foreign refineries are not now capable of producing large quantities of unleaded gasoline, petrochemical feedstocks, and other types of light products most in demand by the U. S. economy will prevent a surge in product imports. It should be obvious that a surge in product imports would force many efficient domestic refiners out of business, thereby exporting U. S. jobs and worsening our balance of payments problem. U. S. policy cannot permit this to happen, since a strong domestic refining industry is so critical to our national security. One way to thwart it would be a tariff on imported products--roughly equal to the cost disadvantages imposed upon the domestic industry by our own social requirements. Frankly, I feel that such should not be necessary at this time, so long as the government states positively that it would impose such a tariff if product imports began to increase substantially, thus sending a clear signal that foreign nations should not expand or modernize their plants hoping to find a temporary outlet in U. S. markets.

Severe though the above problems are, they pale in comparison for virtually every refiner--especially independents--with the need for crude oil supply security. I stated earlier that the domestic industry needs to make sizable investments to retrofit our plants for turning out more and better products

from poorer quality crudes. Yet, even with tax incentives, no one would make those investments if there is a real possibility that he couldn't acquire crude oil to operate his plants at an efficient level.

Ashland Oil is a good example. We spend huge amounts annually to maintain and improve our refineries, and would match their efficiency with any in the world. We likewise devote a lot of time, talent, and capital in research for refining process improvements. This year we announced the development of a new process--which we call Reduced Crude Conversion--that will enable us to significantly increase the yield of gasoline and distillate from a barrel of crude, at the expense of residual fuel oil yields. We consider this a significant breakthrough in refining technology, and are proud to have made such a contribution. We plan to build a 40,000 B/D unit utilizing this technology at our largest refinery in Catlettsburg, Kentucky, at a cost of over \$135 million.

Our conventional refining capacity is rated at 450,000 B/D. In order to supply crude oil for those refineries we have crude oil purchasing people throughout the world contacting primarily the national oil companies in Saudi Arabia, Mexico, Nigeria, etc. The world crude oil situation has changed drastically over the last two to three years. The national oil companies are making more country to country deals, thereby diminishing the crude oil available for small and independent companies. Unless companies are willing to commit to large expenditures in the producing countries, in many instances it is not possible to make term contracts for crude. Many producing countries

are backing out of contract crude sales and are putting increasing quantities of spot crude in the world market. We have long since learned not to rely on any crude purchases from the major oil companies--it is just not possible. At this time we have enough crude to process 340,000 B/D, or about 75% capacity, which is close to the national average. However, our costs are high and we are unable to obtain adequate product prices to make a fair return on our refining operations.

The fact that product prices do not reflect recent increases in crude oil costs causes us to fear that the major companies, with their large crude oil production, are once again subsidizing their refining and marketing operations. This is particularly likely with the huge profits now being realized by producing companies from the decontrol of domestic crude. I again suggest that some sort of functional accounting should be mandatory to assure that non-integrated companies--such as those in only refining and marketing, which serve an important role in supplying product to this nation--can compete on nearly equal footing. We don't object to the crude oil profits, so long as they are not used to subsidize downstream operations.

Another thing that gives me great concern is the drive by the major companies, with large bank accounts, to buy out or make drilling commitments and receive a call on new crude oil discoveries, i. e., Shell/Belridge (\$3.6 billion), Sun/Texas Pacific (\$2.3 billion), Mobil/TransOcean (\$740 million), Getty/Reserve (\$628 million), Sohio/Webb Resources, Mobil/General Crude, Phillips/Anschutz (8 million acres), Amoco/Union Pacific acreage deal, ARCO/Cheyenne Tribe (455,000 acre deal), Texaco/Mesa drilling fund and others that

are less in magnitude. Millions of acres are being removed from areas where we and other independent refiners now purchase domestic crude oil.

Ashland is characterized in the industry as a large independent refiner--which seems to be a forgotten breed. In writing the Emergency Petroleum Allocation Act, the Congress properly recognized the importance of independents, with their efficient, regionally oriented refineries which are a significant competitive force in the industry. Yet, in implementing EPAA, the Department of Energy has virtually ignored the mandate of EPAA "to protect the competitive viability of small and independent refiners," and especially in recent years has seemed concerned only with the problems of small (under 175,000 B/D) refiners. There is today no DOE program which recognizes independents as a distinct category. Because we don't have the inherent advantages of substantial crude oil integration as do the majors, nor attention from DOE as do the smalls, the independent refiners today have the highest crude oil costs and lowest crude oil availability in the nation. This is a situation which must be corrected.

Independent refiners do not want subsidies, nor guarantees against failure. We feel that our continued existence should be fully justified by our efficiency. I have long said we could spot the majors 50¢/barrel in feedstock costs, and still whip them in the marketplace. But crude short refiners can't afford to pay spot prices for crude oil at \$40-\$45 per barrel, while they buy at contract prices of \$30-\$35. Yet that is the situation which exists today.

In truth, independents are disadvantaged on the international and domestic crude oil markets in times of tight supply. Major companies control much of the domestic production--either through ownership of the crude or the gathering systems. Internationally, the majors have long associations with the producing countries, and hence long standing contracts even where their former producing properties have been nationalized. Independents can get only short term contracts, often with quarterly price reopeners, which are often aborted unilaterally by the producing country.

It is a myth (perpetuated largely by the majors who control the crude) that there can and will be a free, workable market for crude oil, capable of self allocation, once decontrol is accomplished. There hasn't been a free market in crude oil for years, and there isn't likely ever to be one again. Crude oil today is a political instrument rather than an economic commodity. Crude markets are highly politicized and controlled by governments with varying political objectives on which crude oil is used as a lever. Pure economics is not their primary motivating force.

We must recognize all these factors if we are to maintain a viable domestic petroleum industry relatively free from political blackmail. The U. S. Government must take action to restore some semblance of a free market that international politics has undermined. We have an International Energy Agency agreement which requires sharing of crude oil among nations in times of shortage, in order to assure that no nation goes without. The program is

designed to prevent disproportionate access to scarce supplies by the wealthy nations, who can bid up the price. We cannot afford to do less domestically. In order to encourage the investments needed, and to assure continued operation of the widely dispersed, efficient domestic refineries needed for national security, we need a program which allocates crude oil domestically in shortage situations.

Unless there is some form of allocation in the U. S. market it is obvious spot prices of foreign crude will continue to increase especially during times of shortages. In order for crude deficient refiners to supply customers who are totally dependent on them in isolated markets, they will be forced to go to the spot market and bid up crude prices even though in many cases they will not be successful in acquiring the crude. Since no company in a tight market is willing to relinquish supply, the exporting countries will take full advantage of the fact there are many frantic buyers trying to secure supply. As we all know, the spot market encourages producing countries to increase their contracted prices in order to obtain so-called "true" value of their crude which is verified in the spot market. In our opinion world crude prices today would be lower if a portion of the lower cost contracted crude had been allocated especially during times of shortages.

Such a program might have participation criteria based on efficiency or complexity to prevent further construction or continued operation of the small "tea kettles" which proliferated under favorable controls during the last few years. It could have triggers measured by differentials between spot and contract prices on the international markets, or by volume shortages. Any participant could be a buyer or seller, depending upon its particular supply situation compared to the national average. Selling prices could be set high enough to encourage all refiners to seek their own supply as quickly as the international situation allows.

Such a program should not be difficult to work out mechanically. Given assurances that they will not lose more than a proportionate volume of supply in periods of shortage, refiners will not hesitate to make the necessary investments, and we can maintain a healthy refining industry so necessary to our nation's security. Absent such a program, our most efficient refining capacity may fall by the wayside, with our national defense posture sorely jeopardized.

Mr. MAGUIRE [presiding]. Thank you very much. Mr. Beghini.

STATEMENT OF VICTOR G. BEGHINI

Mr. BEGHINI. Thank you, Mr. Chairman. My name is Victor G. Beghini. I am vice president of supply and transportation for Marathon Oil Co. I would like to file my detailed statement for the record [see p. 42] and present our general views on domestic refining issues. I want to emphasize I am speaking only for Marathon Oil.

The overriding goal of our Nation's energy policy is to reduce our dependence on imported crude oil and refined products. A properly defined domestic refining policy is necessary to achieve that goal. The key lies in upgrading domestic refining capacity to maximize the quantity of high demand light products—transportation fuels, residential heating fuels, and petrochemical feedstocks—refined from each barrel of crude oil. It also requires displacing heavy residual fuel demand for stationary energy requirements such as power generation and industrial heating with coal, natural gas, and nuclear power. This strategy would allow the displaced heavy residual fuels to be converted into lighter products, thus resulting in lower imports of crude oil and refined products.

The need to upgrade is further intensified by three factors which will seriously impact the economic and competitive viability of the U.S. refining industry.

First, crude oil pricing increasingly reflects the finished product value from processing in an efficient refinery. International price competition will dictate that available crude supplies shall move to those countries whose refining systems can squeeze the maximum volume of more valuable high-demand light products from each barrel of crude processed.

Second, you have heard this more than once this morning, the types of crude oils forecast to be available in the future will decline in quality while at the same time demand for light products is forecast to increase. Such crudes will contain a greater amount of sulfur and a greater percentage of heavy residuals which is that portion of the barrel which boils above 1,000° F. The current United States composite domestic crude oil stream has a heavy residual average on the order of 10 percent to 12 percent by volume. However, it is estimated that over three-fourths of the free world's remaining crude reserves are high sulfur crudes. These reserves have a heavy residual yield which averages over 20 percent by volume. As more of the heavier types of crudes are processed in U.S. refineries, high sulfur residual production will be increased. However, the increased use of coal and other alternative energy sources will lower demand for all heavy residual grades, particularly high sulfur. In echoing Bob's comments, very few of today's efficient refineries are currently able to convert heavy residual into high-demand light products.

Third, oil exporting nations are now developing their own refining industry to process indigenous crude oil. This refining capacity will no doubt consist of highly sophisticated plants, emphasizing production of high-demand light products. Such refineries will place additional economic pressures on available crude supplies.

The failure of the U.S. refining industry to respond to these new international competitive pressures will relegate the country to a position of importing products rather than crude oil, thus exacerbating our dependence upon insecure supply sources.

Government's role in refining policy should be to create the climate necessary for the industry to make the huge investment required to upgrade the conversion capability of domestic refining capacity. The willingness to make the investment is materially affected by Federal pricing and allocation policies, tax policies, anti-inflation policies, and environmental and safety requirements.

An effective Government policy to minimize crude oil and refined product imports and insure the maximum production of high-demand light products requires that we:

One, return to a decontrolled competitive market for crude oil and petroleum products as soon as possible, recognizing that subsidization of one segment of the refining industry by another does not enhance competition.

Two, eliminate regulatory uncertainties and simplify permit and license requirements in order to allow the refining industry to plan for the required investments.

Three, encourage investments which upgrade refining efficiency, particularly those investments which are targeted at upgrading the heavy residual portion of the barrel into high-demand light products.

Four, develop a standby emergency allocation program which, when implemented, would direct available crude supplies during serious supply interruptions to the most efficient refiners.

Price and allocation controls should be removed as soon as possible, but no later than September 30, 1981, when current EPAA controls are scheduled to expire. No controls are needed after September 30, 1981, and the only program that may be necessary is one for emergency situations. Even this program should be limited to periods where the nation suffers a serious supply interruption. We have defined this trigger in prior hearings with the Energy Department as being 20 percent from prior year levels for a 60-day period. During such periods, allocation controls should apply to everyone, regardless of size. Crude oil should be allocated to those plants that can efficiently produce the highest volume of the kinds of products most in demand by the Nation.

Based on a National Petroleum Council survey conducted in January 1979, only slightly in excess of 2,772,000 barrels per day, or 16.4 percent of our refinery capacity, has the capability to process all available types of crude oil, both sweet and sour, into high-demand light products. Moreover, fully one-half of our refineries, representing over 16 percent of capacity, can be classified as "inefficient." Most of these inefficient refineries are limited to low sulfur sweet crudes as their feedstocks, a supply which is diminishing. These inefficient refineries produce 17 percent fewer light products than an efficient refinery would if processing the same crude.

Government refining policy must actively encourage the upgrading of refinery capability if we are to maximize the production of high-demand light products and at the same time minimize our dependence on unstable foreign crude oil sources. We must resist

the temptation of providing crude cost subsidies or access to a guaranteed crude supply to any particular segment in the industry in the name of competition. A review of the impact of existing Government programs on industry practices and industry growth since 1974 clearly shows that rather than fostering competition, these programs have stifled it by removing incentives from the efficient segment of the industry. It has created and perpetuated a new segment of the industry which is wholly dependent upon such programs for its economic survival.

The entitlements program was originally devised to equalize refiners' access to price-controlled domestic crude oil. However, it has increasingly been used as a transfer payment mechanism from one segment of the refining industry to subsidize numerous other programs. Out of the \$16.3 billion that has been transferred under the entitlements program, only 56 percent or \$9.2 billion reflects the original intent of the program. That is to equalize refiners' access to price controlled oil.

An additional \$3.2 billion, or 20 percent, has been given to small refiners under the small refiners bias. The remaining \$3.9 billion, or 24 percent, has been divided among all of the various subsidies attached to the original program.

The buy/sell program was originally an emergency measure designed to enable refiners who suffered supply interruptions to maintain crude runs at levels approaching the national average. However, only refiners with refining capacity of less than 175,000 barrels per day are eligible to receive crude oil. The 15 largest refiners are forced to sell them crude, often at less than replacement cost, regardless of the large refiners' own crude supply situations. Since its inception, the program has allocated 1.5 billion barrels of crude oil. In 1979, a period of high demand for light products, this transfer of crude oil from the most efficient segment of the industry directly resulted in our Nation having approximately 900 million fewer gallons of light products available from the processing of such crude.

The Office of Hearings and Appeals is the administrative office within the DOE charged with hearing appeals of DOE decisions and granting exceptions to DOE regulations. Some limited amount of exceptions relief may be justified in extreme circumstances. However, OHA has directed the sale of 34.3 million barrels of crude oil through the buy/sell program and granted \$1.2 billion of relief through the entitlements program to refiners who for various reasons used this vehicle to achieve improved profitability.

In many instances, these exceptions are determined with a complete disregard of due process in OHA proceedings. The most flagrant example is OHA's failure to enter final decisions in most cases, thereby preventing its temporary decisions from being tested by appeal to the courts. Of 43 temporary exception relief approvals issued by OHA between October 4, 1979, and October 30, 1980, only 7 have become final orders subject to review.

The effect of these types of programs on the refining industry is striking in its subversion of our national energy goal. Here I would like to make a correction in the statement, as of January 1979, rather than 1980, out of 49 new refineries which have gone on stream since 1974, only one, Marathon Oil Co.'s 255,000 barrels per

day plant at Garyville, La., has a capacity over 50,000 barrels per day. Including Garyville, only six of these plants can accept high sulfur crude oil as feedstock. And only three have a capability to convert the middle of the barrel into high-demand products.

These programs transferred precious crude oil resources to a new segment of the industry which was born out of Government-directed subsidies. These programs rewarded the building of small inefficient plants in an industry where the economies of scale and efficiency are significant factors in the competitive process.

Programs, such as the entitlements program and the buy/sell program, and other regulatory uncertainties are a major deterrent to investments in the refining industry. Refiners can accept the normal risks of the free market, but not those brought about by sudden and drastic changes in regulatory posture. A major upgrading project involves huge sums of money and may take 4 or 5 years from initial engineering to completion. Short of a national crisis, it is critical that regulatory programs not increase the risk of such investments. Refiners must be confident of: One, being able to process their crude supplies in their own refineries; two, not having product price controls which artificially reduce the economic driving force which generated the capital commitment; and three, not having the project unduly delayed by licensing and permitting requirements.

Marathon believes that traditional investment attracting incentives, when coupled with elimination of regulatory uncertainty, will be sufficient to create a climate to upgrade U.S. refining capacity. Such incentives should leave the basic economic risk with the investor. Particular encouragement should be given to capital investments which upgrade the heavy residual portion of the barrel. Upgrading this portion of the crude stream can have a significant impact on reducing imports. We estimate for each barrel of residual conversion which occurs, there is a potential to reduce imports by three-quarters of a barrel.

The United States, as the world's largest user of light petroleum products, is in a particularly vulnerable position unless we significantly upgrade our domestic refining system. We have been dependent upon petroleum imports for some time and will remain so for at least the near-term future. The question really is whether it is better to be dependent on product imports than it is to be dependent on crude imports. The answer is clear. Increasing reliance on product imports merely creates a second level of dependency on insecure supply sources and further impairs our balance-of-payments position and national security objectives. Thank you.

[Testimony resumes on p. 95.]

[Mr. Beghini's detailed statement follows:]



DOMESTIC REFINING POLICY

Marathon Oil Company

The overriding goal of United States energy policy is to minimize America's dependence on imported crude oil and refined products. A properly defined domestic refining policy has an important role in achieving that goal. The key lies in upgrading United States refining capacity to maximize the quantity of high-demand light products--transportation fuels, residential heating fuels, and petrochemical feedstocks--refined from each barrel of crude oil.

The need to upgrade is premised upon three factors which seriously impact the economic and competitive viability of the United States refining industry:

First, crude oil pricing increasingly reflects the finished product value from processing in an efficient refinery. Such a refinery can convert the "middle of the crude barrel" into high-demand light products, such as gasoline, kerosene, diesel, jet fuel, #2 fuel oil, and petrochemical feedstocks. International competition will dictate that available crude supplies move to those countries whose refining systems can squeeze the maximum volume of high-demand light products from each barrel of crude processed.

Second, the types of crude oils forecast to be available in the future will decline in quality, but at the same time demand for light products is

forecast to increase. Such crudes will contain higher sulfur and a greater percentage of heavy residuals (1000°F+ Boiling Range). Three-fourths of the free world's remaining reserves are high sulfur crudes and have a heavy residual yield in excess of 20 percent by volume. (Our current composite domestic crude oil stream has a heavy residual average of 10 to 12 percent by volume.) However, very few of today's "efficient" refineries are able to convert heavy residuals into high-demand products. In order to maintain light products supply, new technology must be developed and installed to recover additional light products from the heavy residual portion of the crude barrel.

Third, oil exporting nations are now developing their own refining industries to process indigenous crude oil. This refining capacity will no doubt consist of highly sophisticated plants emphasizing production of high-demand light products. Such refineries will place additional economic pressures on available crude supplies.

Failure of the United States refining industry to respond to these new international competitive pressures will relegate the country to a position of importing products rather than crude oil, thus exacerbating our dependence upon insecure supply sources.

Exhibit 1 reflects the distribution by size and complexity of United States refining systems. As can be seen, the capability of converting crude to yield high-demand light products is not evenly distributed among all refiners. The report from which Exhibit 1 was taken noted that:

"Of the 244 refineries reporting, 90, representing 7.7 percent of the capacity, were under a factor of 3.0 and 42 refineries, representing 35.3 percent, were in a factor range of 7-9. Refineries below 3.0 complexity factor normally have only distillation units and are capable of manufacturing only residual fuel oil (heavy fuel oil) No. 2 oil (home heating oil) naphtha (an intermediate gasoline feedstock which requires additional processing before use) and asphalt. Refineries in the 5-7 range

typically have catalytic cracking units, reformers and alkylation units and are able to produce a wide range of products (in the yields necessary to meet consumer needs). The plant in the 7-9 range generally has hydrodesulfurization capability (capability to remove sulfur from the product of medium and high sulfur crude oils) in addition to the facilities of the 5-7 range refineries. A refinery in the over 9 range category generally has hydrocracking units (expensive and complex units which can artificially break down the large molecules of heavy heating oil into smaller and lighter molecules such as gasoline)." (Parenthetical explanations added.)

A review of Exhibit 1 indicates that 90 of the refineries surveyed can only manufacture products which are naturally available in a barrel of crude. Further, 16.4 percent of domestic capacity (50 percent by number) can be classed as "inefficient" in processing capability. Exhibits 2 and 3 indicate the difference in high-demand light product production from an "inefficient" and "efficient" refinery. Out of 1,000 barrels of crude charge, the "inefficient" refinery yields 642 barrels of light products while the "efficient" refinery yields 817 barrels. The "efficient" refinery is capable of producing twice as much gasoline but at the same time is flexible enough to decrease gasoline production and increase diesel fuel and home heating oil, should the national demand require it.

The impact of existing government programs is very apparent in reviewing industry growth since 1974. Out of 49 new domestic refineries which came on stream, only one--Marathon's 255,000 barrel per day Garyville, Louisiana plant--has a capacity over 50,000 barrels per day. Excluding Garyville, only five of these plants can accept high sulfur crude as feedstock, and only two have capability to convert the "middle of the barrel" into high-demand light products.

The national refining objective should be to have more refineries with a complexity factor of nine or greater. Referring again to Exhibit 1, only 16.4 percent of our refining capacity is in this category.

Exhibit 4 indicates a potential reduction of 1,273,000 barrels per day of crude oil imports if the heavy resid portion of the barrel (1000°F+ Boiling Point) could be processed in light products. Other conclusions are:

1. The balance of payments would be improved by \$16.3 billion annually.
2. A capital expenditure of \$18 to 20 billion would be required.
3. Employment in the construction industry would be much greater as the time frame to complete the total program would run six to eight years.
4. By implementing a national goal to improve refining efficiency, greater gains would come about through improvements beyond first-generation type facilities for processing heavy crude into high-demand light products.

Government has an important role to play in creating a climate necessary for the industry to make the huge investment required to upgrade the conversion capability of United States refining capacity. The willingness to make the investment is materially affected by federal pricing and allocation policies, tax policies, anti-inflation policies, and environmental and safety requirements.

An effective government policy to minimize crude oil and product imports and insure the maximum production of high-demand light products requires:

1. Returning to a decontrolled competitive market for crude oil and petroleum products as soon as possible, including the elimination of the so-called "entitlements" program;

2. Replacing the current Emergency Petroleum Allocation Act (EPAA) with a program of standby emergency allocation authorities which would result in the most efficient utilization of available crude supplies during serious supply interruptions;
3. Providing incentives (such as accelerated depreciation and additional tax credits) for efficiency-enhancing investments targeted at upgrading heavy residuals; and
4. Eliminating regulatory uncertainties and simplifying permit and license requirements.

United States refinery construction since the embargo has--except for Marathon's Garyville facility--been almost entirely dictated by EPAA regulation. The consequences have been described as follows:

"Some oil experts are predicting that the U.S. is going to experience a shortage of refinery capacity in a few years. One of the reasons, they add, is that too many refineries are being built. If you think you detect the antic touch of your federal government somewhere in the paradox, you're right. Through some convoluted manipulations of oil-price controls, the government has set off a veritable boom in small refineries. Since 1976, the total number of refining companies in the U.S. has grown by 41, or more than 31 percent, and the pace seems to be accelerating.

"The exploding refinery population consists almost entirely of inefficient, inappropriately designed plants whose main function is to enrich their owners at public expense. Subsidies to these small refiners now run well over a billion dollars a year. The government siphons the money away from bigger oil companies, but the consumer ultimately pays.

"Few of the subsidized refineries can do what most needs doing. Most are tiny -- handling no more than 10,000 barrels of crude oil per day -- an anomaly in an industry where standards of efficiency, productivity, and flexibility call for plants with capacities of at least 175,000 barrels per day. And few of these little 'teakettles' are capable either of cleaning up the 'sour,' or high-sulfur, crudes that are relatively plentiful, or of 'cracking' the less valuable petroleum fractions into the gasoline and heating oils that the nation most needs." (Fortune, August 14, 1978, p. 148).

Current EPAA regulations work contrary to the most efficient utilization of available crude supplies and systematically favor inefficient over efficient refineries. The problem is not simply one of refinery size; it is one of refinery efficiency.

The United States, as the world's largest user of light petroleum products, is in a particularly vulnerable position unless we significantly upgrade our domestic refining system. We have been dependent upon petroleum imports for some time and will remain so for at least the near-term future. The question really is whether it is better to be dependent on product imports than it is to be dependent on crude imports. In Marathon's judgment, the answer to that question is clear: increasing reliance on product imports merely creates a second level of dependency on insecure supply sources and further impairs our balance of payments position and national security objectives.

POLICY OBJECTIVES

In view of this, Marathon respectfully suggests that the objectives of any domestic refining policy should be to:

1. Minimize crude oil imports by maximizing production of high-demand products--transportation fuels, residential heating fuels and petrochemical feedstocks--from each barrel of crude oil processed, and rely to the greatest extent possible on coal and other abundant or renewable energy forms for stationary energy requirements such as industrial heating and power generation;
2. Satisfy military and national security objectives by preventing reliance on imports of foreign-refined petroleum products; and thereby avoid creating a "second level of dependency" on insecure supply sources with further impairment of our balance of payments;

3. Encourage the upgrading and maximum utilization of efficient refineries capable of processing high sulfur, low gravity crude oils--those types of crudes forecast to be most available in the future--into high-demand products;
4. Preserve and enhance competition in the petroleum refining industry, recognizing that subsidization of inefficient refiners is not "enhancing competition"; and
5. Minimize the regulatory uncertainty which frustrates and delays the capital investments necessary to develop a strong internationally competitive refining industry.

(Attached to this synopsis is Marathon's response to the Department of Energy's June 10, 1980 Refinery Policy Study - Summary Analysis. This response covers in detail Marathon's proposal to achieve the above objectives.)

September 1980

EXHIBIT 1

REFINING CAPACITY DISTRIBUTION BY PROCESS COMPLEXITY FACTOR **

as of January 1, 1979

(Capacities Aggregated in MB/D, With
Number of Reporting Refineries in Parentheses)

"Complexity Factors"

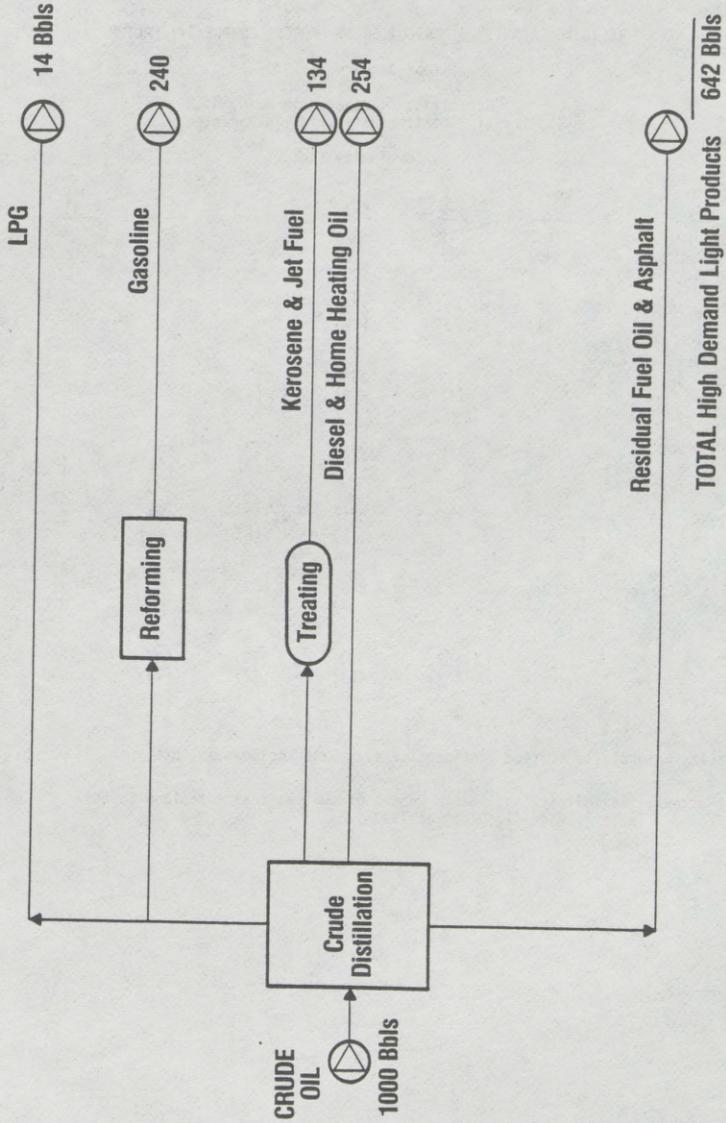
Size	"Complexity Factors"						Total
	Under 3	3-5	5-7	7-9	9-11	Over 11	
0 - 10	264 (48)	43 (7)	0	*	0	*	327 (57)
10 - 30	636 (34)	*	245 (12)	*	0	0	1,193 (60)
30 - 50	*	493 (12)	356 (8)	217 (5)	*	*	1,454 (34)
50 - 100	*	*	1,041 (16)	963 (13)	233 (3)	316 (4)	2,931 (41)
100 - 175	0	*	1,071 (8)	1,107 (8)	688 (6)	*	3,605 (28)
175 & Larger	0	*	2,668 (7)	3,603 (13)	*	$\frac{6,371}{20}$	7,367 (24)
Total	1,308 (90)	1,458 (37)	5,380 (51)	5,959 (42)	1,487 (13)	1,285 (11)	16,878 (244)

*Data withheld to protect confidentiality. Data included in total.

**Refinery Flexibility, An Interim Report of the National Petroleum Council.
Vol. 1, Table 8, Page 41, December 1979

EXHIBIT 2

INEFFICIENT TYPE REFINERY Complexity Factor 3-5



EFFICIENT TYPE REFINERY Complexity Factor 7-9

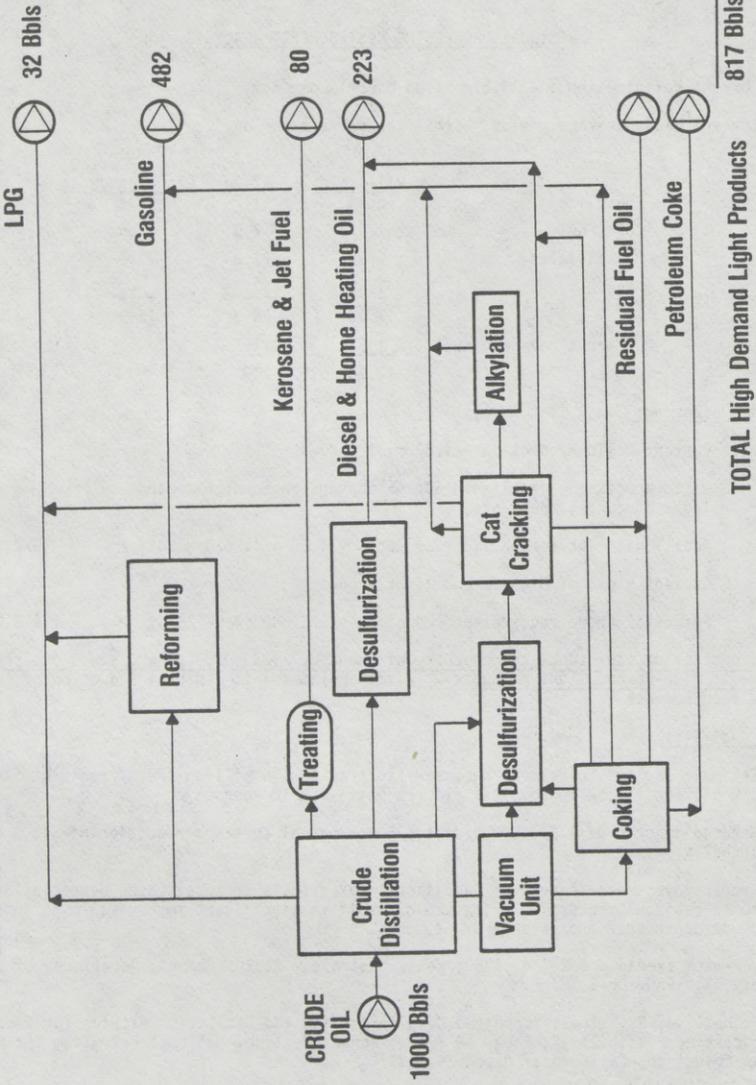


EXHIBIT 4

RESIDUAL PROCESSING COST/BENEFIT ANALYSIS

- A. Current refining input - 13.5 million barrels per day.
 B. Current daily average yields ^{*/} (million barrels per day).

	Mill. b/d	%	% High-Demand Light Products
Gasoline	6.44	47.7	47.7
Jet Fuel	1.03	7.6	7.6
Distillates	2.84	21.0	21.0
Resid	<u>1.62</u>	<u>12.0</u>	-
	11.93	88.3	76.3
Other & refinery fuel	<u>1.57</u>	<u>11.7</u>	
Total	13.50	100%	

Resid Processing:

Assume: Current Resid Production - 1.62 mill. b/d

Resid processing results in 60% ^{**/} conversion to high-demand light products; therefore,

Additional high-demand light products = 1.62 mill b/d x 60% = 972,000 b/d

Current yield of high-demand light products = 76.3%

Potential crude requirement reduction = 972,000 b/d ÷ 76.3% = 1,273,000 b/d

Resid processing can reduce the crude requirement by 1,273,000 b/d and yield the current volume of high-demand light products. This translates into a direct reduction of imported crude requirements.

Cost Analysis:

1. Estimate capital investment necessary to process 1.6 million b/d of resid at \$18 to \$20 billion. Time to complete all projects--6 to 8 years.
2. Reduced imports of 1,273,000 b/d at \$35 per barrel equals a reduction of \$16.3 billion annually.
3. Proper investment incentives (additional tax credits or accelerated depreciation) to build residual processing units would result in significant improvements in foreign crude dependence and balance of payments.

^{*/} Four-week averages 5/2-7/4, 1980; Weekly Petroleum Status Report; Department of Energy; July 11, 1980, pp-3

^{**/} Mitchell, B. R., et al; "Combined Desulfurization and Catalytic Cracking for Crude Processing Flexibility"; Paper AM-77-36; Annual Meeting, National Petroleum Refiners Assn, San Francisco, California; March 29, 1977

V. G. Beghini
Vice President
Supply & Transportation



**Marathon
Oil Company**

Findlay, Ohio 45840
Telephone 419/422-2121

August 8, 1980

The Honorable William Lewis
Assistant Secretary for Policy
and Evaluation
U.S. Department of Energy
1000 Independence Avenue, N.W.
Washington, D.C. 20585

RE: Refinery Policy Study--Summary Analysis

Dear Mr. Lewis:

Marathon Oil Company appreciates this opportunity to contribute to the Department's Refinery Policy Study, a June 10, 1980 draft "Summary of Analysis", which you recently distributed.

The overriding goal of U.S. energy policy is to minimize America's dependence on imported crude oil and refined products. A properly defined domestic refining policy has an important role in achieving that goal. The key lies in upgrading U.S. refining capacity to maximize the quantity of high-demand light products--transportation fuels, residential heating fuels, and petrochemical feedstocks--refined from each barrel of crude oil.

The need to upgrade is intensified by the declining quality of available crude supplies. Three-fourths of the free world crude reserves are high sulfur crudes. A major portion of these have yields of heavy residual (1000°F+) in excess of 20 percent by volume. As more of these types of crudes are processed in U.S. refineries, high sulfur residual production will be increased. Increased use of coal will lower U.S. demand for heavy residual of all grades and high sulfur residual demand will no doubt feel the major impact of the lower demand. Conversion of heavy residuals into

lighter products will result in lower imports of crude oil and refined products.

Refinery upgrading is also required to maintain the economic viability of many American refineries. Increasingly, foreign crude oil prices are set with reference to the value of the finished product output derived by processing crude in today's efficient refinery. Such a refinery can convert the "middle of the barrel"--light fuel oils--into high-demand light products, but is unable to convert heavy residuals into these valuable products. Consequently, as the price differentials between light and heavy products have increased, the price differentials between high- and low-quality crudes have also increased to reflect the diverging product values of these crudes. Such pricing structures will place great pressure on those refiners whose simplistic refining configurations generally allow them to produce only relatively low-value products.

Due to the efforts of oil exporting nations to develop indigenous refining industries, competitive pressure could be exerted on all U.S. refineries unless they upgrade and retrofit their plants to process crude oil more efficiently. New OPEC refining capacity will no doubt consist of highly sophisticated plants emphasizing the production of high-value, high-demand light products. If U.S. refineries fail to upgrade their plants, the country could be relegated to the position of importing products rather than crude--thus exacerbating our dependence on insecure supply sources.

Government has an important role to play in creating the climate necessary for the industry to make the huge investment required to further increase the conversion capability of U.S. refining capacity. The willingness to make the investment is materially affected by Federal pricing and allocation

policies, tax policies, anti-inflation policies, and environmental and safety requirements.

An effective government policy to minimize crude oil and product imports and ensure the maximum production of high-demand light products requires:

- a. returning to a decontrolled competitive market for crude oil and petroleum products as soon as possible, including the elimination of the so-called "entitlements" program;
- b. replacing the current EPAA regulatory structure with only a program of standby emergency allocation authorities which will result in the most efficient utilization of available crude supplies during serious supply interruptions;
- c. providing affirmative incentives (such as accelerated depreciation and additional tax credits) for efficiency-enhancing investments targeted at upgrading heavy residuals; and
- d. eliminating regulatory uncertainties and simplifying permit and license requirements.

It is essential that price and allocation controls be removed as soon as possible, but no later than September 30, 1981, when current EPAA controls are scheduled to expire. Any controls beyond September 30, 1981, should only be standby in nature and limited to periods where the nation suffers a serious interruption--that is, a 20 percent crude oil supply shortfall from prior year levels for two consecutive months. Because any mandatory allocation program will necessarily create inequities and disrupt market incentives, it should be limited to times of true crisis.

During such periods, the basic allocation criterion should be the national efficient refinery utilization rate--in essence, a modification of the "national utilization rate" currently calculated by the DOE which would incorporate the concept of refinery efficiency. Allocation controls should apply to everyone without regard to size: every refiner, large or small, should be designated either as a buyer or a seller based upon crude availability and plant efficiency.

A standby emergency allocation program premised on the concept of efficiency makes unnecessary the current DOE "Buy/Sell" program which arbitrarily assigns the full economic burden of the allocation program to a handful of "refiner-sellers" (fifteen companies selected at the outset of the EPAA program on the basis of refinery capacity alone, without reference to actual crude oil supplies). It also makes unnecessary the complicated system of entitlement biases, exceptions and other regulatory biases which have, in truth, worked to shift crude supplies from efficient to inefficient refiners. The light product losses to the nation from hidden subsidization of inefficient refiners under DOE's "Buy/Sell" program--estimated to be approximately 900 million gallons in 1979--would be eliminated.

The technology to process heavy residuals to higher-demand light products is available, but is not risk-free as it is still early in the commercial development stage. Expensive metallurgy and equipment are required. In spite of these risks, investments to install heavy residual conversion processes will be made if an adequate return on investment can be anticipated. Government can provide an incentive by having such investments qualify for an additional investment tax credit or accelerated depreciation treatment.

A major deterrent to such investments is regulatory uncertainty. Refiners can accept the normal risks of the free market, but not those brought about by sudden and drastic changes in regulatory posture. A refinery upgrading project takes three to four years from initial design to completion. Short of a national crisis, it is critical that regulatory decisions do not increase the risk of such investments. Refiners must be confident of (a) being able to process their own crude supplies in their own refineries; (b) not having product price controls which artificially reduce the economic driving force which generated the capital commitment; and (c) not having the project unduly delayed by licensing and permitting requirements.

A government refining policy consistent with the public interest will resist the temptation of providing crude cost subsidies to any particular segment of the refining industry. That type of government program will only encourage and perpetuate refining inefficiency. Any future government program which burdens the efficient segment of our industry with these kinds of subsidies will plainly result in yet another government-imposed cost and hidden tax which must be passed along to the consumer in the form of higher product prices.

A decontrolled competitive market and replacement of the current EPAA controls with the standby emergency allocation program described herein would, when coupled with the affirmative tax incentives and the removal of regulatory disincentives, be a clear signal by the Federal government to the domestic refining industry to upgrade plants to process available crude supplies into the transportation fuels, residential heating fuels, and petrochemical feedstocks which reflect national demands and national priorities. This would result in a substantial reduction in crude oil and refined product imports.

With this preface, Marathon's specific comments and suggestions are structured around the three issues identified in the Refinery Policy Summary analysis as "essential to formulation of a coherent refinery policy."

I. The Tariff Issue

Marathon supports development of a free competitive market for crude oil and petroleum products throughout the world. Although a tariff on refined petroleum products is one form of mitigating dependence on such imports, a far better solution would be to have government signal their full support for a strong domestic refining industry.

Crude oil pricing in the future will dictate that crude supplies will move to those countries whose refining systems can squeeze the maximum volume of high-demand products from each barrel of crude processed. Our refining industry can compete on an international basis only if federal policies provide the impetus to upgrade the domestic system. Capital formation can be enhanced with appropriate measures such as increased tax incentives or accelerated depreciation treatment for qualifying investments.

The basic premise of our position is to have a free competitive market structure except in times of crisis. Therefore, we would not object to a properly constructed tariff plan which could be implemented when product imports reach a level which could result in an unacceptable risk to national security or seriously deteriorate the domestic refining industry.

The U.S. is already dependent upon petroleum imports and will remain so for at least the near-term future. The question really is whether it is better to be dependent on product imports than it is to be dependent on crude imports. In Marathon's judgment, the answer to that question is clear: increasing reliance on product imports merely creates a second level of dependency on insecure supply sources and further impairs our balance of payments position and national security objectives.

In our judgment, the draft summary analysis fails adequately to address the fundamental question of whether product dependency is better or worse than crude dependency.

We believe that a fundamental flaw in the draft analysis is the disparagement of the intentions and abilities of the oil selling nations to develop indigenous refining capacities for export purposes. For example, the draft states that OPEC's

"near-term attempts to enter the refinery export market appear very tenuous, as one would expect in a world that already has significant excess refinery capacity. The claims of Arab and other members of OPEC, frequently overstated in the past, cannot be taken as a basis for U.S. policy in the present." (p. 4).

The draft analysis fails to recognize the real economic incentives to the exporting nations to develop refinery export capabilities: product exports provide more profit per barrel than do crude exports; refinery construction (as distinguished from operation) is labor-intensive and thus provides many domestic jobs; acquisition of refinery technology lessens OPEC dependence on industrialized consuming nations; and vertical integration reduces OPEC's vulnerability to countervailing economic pressures from importing nations. The draft analysis also significantly overstates the impact of excess world-wide refining capacity on OPEC decisions to develop an indigenous refining capacity for export markets. The fact of the matter is that refining capacity wherever located--particularly refining capacity in Europe and the Caribbean--is ultimately dependent on OPEC crude oil throughput volumes.

We also strongly disagree with the statement in the draft that, with respect to OPEC:

"The argument that a monopolist can extend his power by tying-in sales of a good in which he has monopoly power with product sales in which he is a competitor is a common misconception. It is difficult to see what economic advantages would accrue to OPEC producers if they were to tie-in refined products with their crude." (p. 4).

Here again OPEC, as a monopoly factor with respect to crude oil, cannot be regarded as a typical competitor on the other ("tied") product--the "competitors" on the tied product (presumably, European and Caribbean refineries) are ultimately dependent upon OPEC itself for the raw material (crude oil) necessary to make the "competing" product.

Finally, the analysis of the relative "comparative advantage" of OPEC export refineries versus European and Caribbean refiners is faulty: new OPEC refining capacity will by definition utilize state of the art technologies and represent grassroots units specifically designed to process the indigenous crude oil of that country.

The failure of the draft analysis adequately to assess the seriousness of increased OPEC product exports must be corrected.

The analysis set forth in the draft summary is also deficient with respect to the downstream refinery additions currently underway in the U.S. In truth, refinery upgrading investments now being made at private initiative will, with very limited exceptions, not reach the heavy residual (1000°F+) portion of the barrel. They are addressed primarily to the "middle of the barrel" to enable greater production of unleaded gasoline. A close examination of the projects cited by DOE makes clear that most will not utilize the technologies necessary to process heavy residual or crudes whose primary product is residual, into high-demand light products. Moreover, most of the projects cited with respect to heavy, high sulfur crudes or residual fuel oil are only at the proposal or planning

stage; they hardly represent upgrading capability which can be counted upon. As DOE notes, these types of upgrading investments are extraordinarily costly. Investment decisions with respect to them will in most cases be postponed until governmental regulatory attitudes become more clear. This point is discussed in more detail below.

Before addressing the next issue specified by DOE, Marathon would like to comment briefly on two other statements made in the draft analysis concerning "the tariff issue". First, on the question of a Jones Act subsidy, Marathon agrees with the point made in the draft analysis that "a subsidy to refiners who use Jones Act tankers may lead to demands for subsidies by shippers of non-petroleum products using Jones Act ships, and create a disincentive to new pipeline construction." (p. 7). The Jones Act requirement to use domestic tankers to deliver residual fuel oil from the Gulf Coast to the East Coast creates an artificial competitive advantage for Caribbean refiners supplying the East Coast residual market compared to the Gulf Coast refiner. Currently, the Caribbean refiner has a shipping cost advantage of \$1.35/bbl. for 30,000 ton spot tankers and \$0.90/bbl. for 60,000 ton spot tankers. A freely competitive market for crude oil and petroleum products, which Marathon supports, requires the removal or neutralization of the Jones Act advantage currently given to foreign refiners. As the Refinery Policy Study points out, historically the imported barrel of residual fuel oil sets the price of all residual in this country. The competitive advantage given to foreign refiners by the Jones Act affects not only those Gulf Coast refiners shipping residual fuel oil to the East Coast markets in Jones Act ships, but any refiner in this country producing residual fuel oil.

Second, the discussion of "protection for small refiners" improperly lumps together small refiners and small inefficient refiners, treating them as presenting identical problems. In our judgment, refinery size and refinery efficiency are in many cases two altogether separate matters. This distinction is discussed in more detail in the remainder of these comments.

II. The Subsidy Issue

The draft analysis asks the question:

"Should Federal subsidies (other than a tariff or import fee) be provided to encourage domestic refiners to upgrade existing refinery capacity or install new capacity to manufacture unleaded gasoline or to process low gravity and high-sulfur crude oil?"

Marathon respectfully submits that the question should not be one of subsidies per se, but rather, one of initiatives and an overall government attitude to create a climate conducive to private investment decisions for efficiency-enhancing refinery improvements.

The draft analysis quite correctly identifies the myriad of disincentives to private investment in refinery reconfiguration: present and proposed Federal energy policies, air quality regulations, Federal price guidelines, the utility oil backout legislation, gasoline price regulations, etc. (p. 9). Not specifically mentioned, although implicitly recognized in the draft analysis, are the effects of the current EPAA buy/sell and entitlements programs to reallocate crude oil from efficient to inefficient refiners.

Perhaps the greatest disincentive, however, is the inherent unpredictability--and therefore intrinsic instability--of Federal regulatory programs. Private industry will readily accept the normal marketplace

risks associated with high-capital investments: the risks of unstable supply and unpredictable consumer demand are recognized and dealt with on a daily basis by virtually every American enterprise. What chills private investment actions--or at the very least delays their being made--is the unpredictability of government attitudes toward the investment under consideration. In particular, regulatory certainty is essential before refiners can reasonably be expected to add large capital items to their plants. As the draft analysis recognizes, the problem is not one of lack of technology--rather, it is the enormous cost of the equipment necessary to refine residuals and higher sulfur crude oil into light products. Simply stated, although product price disparities are large, upgrading investments of the magnitude required will only be made if an adequate investment return can be anticipated over a reasonable length of time.

To create a climate conducive to private investments to reconfigure U.S. refining capacity does not require "subsidies", as that somewhat pejorative term is commonly used. Rather, Marathon believes that traditional investment-attracting incentives such as accelerated depreciation or tax credits for refinery improvements will, if coupled with regulatory certainty and withdrawal of onerous "red tape" barriers, be sufficient to accomplish the task. Whatever affirmative incentives are adopted, fairness and logic require that they be available to all refiners equally, large or small.

With respect to removal of disincentives, what is required is a clear-cut Federal commitment to refinery reconfiguration coupled with steps to carry forth that commitment in the collateral regulatory programs which, although not aimed primarily at refiners, nonetheless have significant indirect impacts on refinery investment decisions. These include

virtually the entire array of governmental regulatory programs which impact on refineries, be they Council on Wage and Price Stability voluntary wage and price guidelines, Environmental Protection Agency regulations, or whatever. Marathon has no quarrel whatever with reasonable Federal regulation of refineries in these areas. But what is necessary is that one Federal regulatory program not operate to frustrate or subvert the purposes of another of even higher priority. The unfortunate recent example of the CWPS price regulations working at odds with DOE refinery investment objectives is the type of situation that must be avoided if private investment is realistically to be expected.

Perhaps the greatest disincentives to private investments in refinery upgrading measures are the instability of DOE's regulatory programs under the EPAA and the numerous penalties built into that regulatory regime against integrated oil companies--particularly, the several methods by which "refiner-sellers" under the current buy/sell program can lose the throughput volumes necessary for the economic utilization of enhanced refineries. This problem is discussed in the next section.

III. The Crude Oil Access Issue

Although as indicated below Marathon believes that certain aspects of DOE's draft analysis of the "access" question are in error, the draft makes the important distinction between the problems of price differentials on the one hand and supply interruptions on the other.

With respect to price differentials, it should be recognized that the greatest difficulties have been the direct result of Federal price controls (and the resulting multitude of tiers and categories of crude oil which make up a typical refinery input mix) rather than price differentials within the OPEC cartel or temporary anomalies in the world spot markets. The

expiration of the EPAA should in and of itself eliminate most if not all of the price-related access problems which have existed since controls were instituted.

Moreover, decontrol will inevitably minimize (if not eliminate entirely) price differentials as market forces replace the artificial distortions inherent in any system of non-market based controls. Of course, quality-based price differentials will remain: sweet, light crude oils will command a substantial premium over sour, heavy crudes. Refinery efficiency will thus take on increased importance, but the upgrading incentives previously discussed should, if adopted, work across the board to encourage the necessary reconfiguration of U.S. capacity.

The supply interruption question is an entirely different matter. Although a supply interruption is, at the moment, only a theoretical possibility, the events of the last decade make obvious the importance of having readily available a contingency, standby program that can quickly be implemented in the event of an emergency. Marathon has in fact proposed such a standby program to the Department of Energy in testimony before the Economic Regulatory Administration in December, 1979. Attached as Exhibit A is a copy of that submission, which is a comprehensive proposal including regulatory language and an implementation plan.

Although both Marathon's December 1979 submission to the ERA and the "supply interruption" segment of DOE's current Refinery Policy Study deal with the period of time following the expiration of the EPAA in September 1981, the Marathon proposal also directly addresses a number of deficiencies of the current EPAA program. That program still has more than a year to

run; however, its deficiencies are having a current and materially adverse impact on refinery reconfiguration investments. Since the Refinery Policy Study begins with the acknowledgment that "a major concern of the Department of Energy is the assurance of a reliable supply of refined petroleum products to meet the demand of U.S. consumers and industries", Marathon respectfully submits that circumstances warrant serious consideration of the immediate adoption of the ideas and concepts set forth in our December 1979 proposal. Put another way, Marathon believes that refinery reconfiguration is sufficiently urgent that it is unnecessary and unwise to delay making necessary regulatory reforms for still another year. An immediate and concerted effort should be made to return to a decontrolled competitive market for crude oil and petroleum products as soon as possible.

As DOE itself acknowledges at several places in the Refinery Policy Study draft summary analysis, "[s]ince the inception of the small refinery bias there has been a proliferation of new refineries whose profitability rests in large part on that subsidy," and "the subsidy . . . encourages the operation of small and unsophisticated refineries." (p. 12). Perhaps the most disturbing result of DOE's EPAA programs is the reallocation of crude supplies from efficient to inefficient refineries. The consequences are significant: attached as Exhibit B is an analysis showing the light products loss to the nation under the buy/sell program in 1979 as a consequence of DOE's hidden subsidization of inefficient refineries. The loss during this period is estimated to be approximately 900 million gallons of light products.

Regulatory programs under the EPAA which have led to a refinery capacity configuration reinforcing dependence on scarce, premium low sulfur crudes are not working to advance the national interest.

Moreover, they have reduced incentives for efficiency-related investments and created a political force working contrary to the objectives of reform.

A key part of the Marathon proposal is to incorporate the concept of refinery efficiency by changing the basic allocation criterion from the "national utilization rate" currently calculated by DOE to the "national efficient refinery utilization rate".

The current DOE buy/sell program arbitrarily assigns to a handful of "refiner-sellers" (15 companies selected at the outset of the EPAA program several years ago on the basis of refinery capacity alone, without reference to actual crude supplies) the entire economic burden of the allocation program.* Under our approach, this would be replaced by an allocation mechanism which applies to all refiners without regard to size; every refiner, large or small, would be designated as either a buyer or seller based only upon crude availability and plant efficiency.

Marathon's proposal is a comprehensive, "self-contained" program which could be adopted at any time by the DOE as an exercise of its rulemaking authority under the EPAA. While the proposal is set forth in detail in Exhibit A, its characteristics and consequences deserve special emphasis and explanation as follows:

A. The Marathon proposal minimizes the inequities and market disincentives inherent in the current regulatory scheme

Any mandatory crude oil allocation program is likely to cause inequity and to seriously disrupt market incentives that would otherwise automatically

* / DOE's current buy/sell program is built on outmoded data. It gives no consideration at all to the current crude supply positions of refiners classified at the outset of EPAA controls as "sellers". The 15 companies designated as sellers under the buy/sell program have lost significant amount of controlled world-wide crude supplies since 1973. Since January 1978 Marathon has lost fully 54 percent of its controlled foreign crude under long-term contracts.

direct available crude supplies to the most efficient refiners. Moreover, mandatory regulatory regimes not infrequently create separate inequities or "injustices" of their own--a mandatory crude oil allocation program may, in transferring the burden of a crude oil shortfall from one party to another, quite possibly reward one who has done the least to protect against a shortage and penalize another who has done the most.

Marathon's proposal minimizes these inequities and disruptions because it is limited to a standby emergency program. We have seen time and again that notwithstanding the extensive EPAA regulations, new situations suddenly arise and the market (even a tightly regulated market) adjusts. The market adjustments following the temporary cessation of Iranian production in early 1979 and the embargo of Iranian crude in November 1979 are just such examples.

Under Marathon's proposal, allocation controls would be implemented only in situations where the extreme measures of mandatory allocation and government market structuring are truly necessary. This would require a 20 percent shortfall in crude oil supplies from prior year levels for at least two consecutive months--a true emergency. By the same logic, mandatory allocation programs so triggered should automatically expire within a short, predetermined period from the time they commence. The experience cited by DOE in the draft Refinery Policy Study analysis with respect to small, inefficient "teakettle" refineries demonstrates that without assurances that mandatory allocation will be limited in time, refiners will begin to respond to regulatory signals rather than to economic signals. They will pattern their business behavior in response to regulatory quirks and incentives (or disincentives) inherent in the allocation scheme rather than to normal market forces. This leads ultimately to worse problems for the domestic economy than might have been caused by the original crude oil supply interruption.

In short, mandatory allocation programs should be available and used only to respond to genuine emergencies. They should not take on a life on their own to a point where they themselves become the source of new and different problems.

B. The Marathon program encourages the most efficient utilization of available crude supplies

Because any mandatory allocation programs--even the more or less permanent ones which have prevailed under the EPAA since 1973--are premised on the existence of "emergency" conditions, it is essential that they provide that available crude oil be directed to the most efficient refiners. There is simply no justification for allocation to inefficient refiners in emergency circumstances.

Under Marathon's proposal, the basic allocation criterion itself incorporates the concept of efficiency--the "national efficient refining capacity" is defined to include refineries capable of producing from each barrel maximum quantities of gasoline, diesel fuel, home heating fuel, aviation fuel, kerosene, and petrochemical feedstock. The basic allocation yardstick excludes those heavy liquid fuels used for stationary boiler heating and power generation for which there are alternatives available such as coal, nuclear power or renewable energy sources. The method of crude oil allocation provided by Marathon's proposal would thus create an incentive for refiners to increase efficiency by upgrading their facilities to handle a wider range of crude oil supplies and produce a higher percentage of high-demand light products.

C. The Marathon program encourages refiners to aggressively pursue new crude supply sources

This objective would be accomplished in two ways. First, foreign spot crude would be excluded from the allocation program. Spot crude is

available to any refiner; the business decision to enter the spot market is based upon such considerations as refining configuration and consumer needs. Refiners purchasing such spot crude should have the privilege of running it in their own facilities. However, companies entering the spot market should neither be rewarded through a contribution from other refiners (whose average crude acquisition costs may be lower) nor penalized by being required to sell that crude to another refiner at a price less than was paid for it.

Second, by limiting the purchase rights of refiner-buyers to 75 percent of the amount necessary to raise their utilization rate to the national level, and limiting the sell obligations of refiner-sellers to 75 percent of the amount necessary to lower their utilization to the national rate, the Marathon program contains built-in incentives to encourage refiners to aggressively pursue new long-term supply contracts.

- D. The pricing provisions of the Marathon proposal reflect the fact that emergency crude oil allocation measures should not be a disguised subsidy program

Pricing of mandatory crude oil sales under an allocation program is inherently difficult. This is particularly so during periods when spot market prices exceed prices under long-term supply contracts. Any barrel of oil taken from a refiner-seller can only be replaced by purchases in the spot market; if the refiner-seller wishes to maintain his own customers at their prior levels, he must pay a higher price for the replacement barrel. In these circumstances, the allocation of crude oil away from a seller to a refiner-buyer is simply an assumption by the refiner-seller of the economic burden of the buyer's failure to obtain crude, either long-term or spot, for processing for his customers.

"Allocation" actions should be directed toward the equitable distribution of supplies in a crisis. They should not serve as a mask for income redistribution or other economic subsidy programs--particularly if the beneficiaries of the subsidies are primarily the inefficient. Subsidization of inefficiency during periods of shortage is economically absurd. It is counterproductive in the short run because such diminished supplies as are available are used in an inefficient way. The consequences are even worse over the long run because subsidy programs--which operate continuously whether or not an emergency really exists--inevitably generate constituencies which work to perpetuate their own subsidization.

Obviously, there are circumstances one can imagine in which direct government subsidization of one group or another is necessary or desirable. However, the existing EPAA programs have not worked as an honest, above-board and direct government subsidy. Rather, they have created a system wherein one class of private companies within an industry (refiner-sellers) subsidize another group of privately-owned companies--their competitors--in the same industry (refiner-buyers). The government has created and presided over this hidden subsidy as a sort of grand Robin Hood, taking from the apparently "rich" and giving to the apparently "poor". In fact, as the DOE draft analysis makes clear, these programs have worked first to create, and then to perpetuate, an entirely new class of "poor"--a large number of inefficient "teakettle" refineries which were built and operated on a government subsidy and are dependent on it for survival rather than a free market system.

The automatic termination or "sunset" aspects of Marathon's proposal will, of course, provide some protection against inequities which may result from incidental, unavoidable subsidizations during any period in

which mandatory controls are effective. However, "sunset" provisions are not enough. The pricing provisions of the allocation program must themselves preclude widespread transfers of allocated crude at less than the replacement costs of the supplies transferred. Recognizing that a severe national emergency may call for drastic measures to cure the temporary crisis, nonetheless the price of crude transferred under the allocation program should at least be equal to the actual cost to the seller of the particular grade of crude oil transferred (including transportation costs) plus a reasonable amount to cover the loss of return on the seller's assets as a result of not having the transferred crude to process through his own plant (approximately \$1.50 to \$2 per barrel). Having the refiner-buyer pay the actual selling price of crude oil transferred puts him in the same position as the refiner-seller in terms of the overriding purpose of the emergency allocation program: that is, to obtain equitable access to crude supplies.

Of course, this approach leaves the door open for the government to provide on a direct, above the table, basis from Treasury revenues any subsidies it may consider necessary to minimize regional differences or to achieve national security objectives.

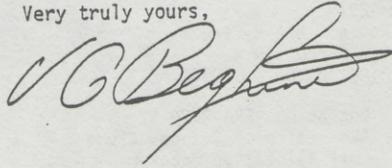
- E. The Marathon proposal effectively reduces the need for widespread exceptions to the basic allocation rules and minimizes the problem of "allocation by exception"

Because Marathon's proposal would apply to all refiners without regard to size--with every refiner designated as either a buyer or seller based only upon crude availability and plant efficiency--the need for "exception relief" is substantially reduced. Of course, those refiners who by their unique location or product yield merit extraordinary assistance could apply for an exception. However, exceptions should be granted

only when overwhelming evidence is produced of unique demand for the output of those particular refiners seeking extraordinary relief and, over time, that they have made an appropriate effort to invest their cash flow in efficiency-enhancing capital improvements.

Again, Marathon Oil Company appreciates this opportunity to comment on DOE's draft "summary analysis" and looks forward to working further with the Department on its Refinery Policy Study.

Very truly yours,

A handwritten signature in cursive script, appearing to read "V. C. Beggs". The signature is written in dark ink and is positioned to the right of the typed name "V. C. Beggs".

V. G. Beghini
Vice President
Crude Oil Trading & Transportation

EXHIBIT A



**Marathon
Oil Company**

Findlay, Ohio 45840
Telephone 419/422-2121

December 20, 1979

Office of Public Hearings Management
Room 2313
Docket No. ERA-R-79-52
2000 M Street, N.W.
Washington, D. C. 20461

RE: Docket No. ERA-R-79-52
Activation of Standby Crude
Oil Allocation Program

Dear Sir:

Marathon submits the following in response to DOE's Notice of Proposed Rulemaking and Public Hearing which sets forth alternative amendments for implementing a Standby Mandatory Crude Oil Allocation Program. We have set forth below our basic proposals and have attached an appendix showing a more detailed plan by which our proposals could be implemented.

We agree that in order to prepare for any future supply emergency, a contingency program should be prepared providing for the fair and equitable allocation of crude oil. Marathon subscribes to an efficient allocation program for available crude which minimizes regional impacts and provides the maximum amount of high-demand product. However, such a program is not needed now to offset an Iranian shortfall that may well be compensated for by a drop in U. S. demand. Also, any shortfall that does occur may well be handled without DOE assistance. We cannot continue the present program of crude allocation by exception. We believe the Economic Regulatory Agency should take a strong position to develop

a policy for crude allocation which will supersede the OHA forum where allocation by exception without policy guidelines is the rule.

Any crude oil allocation program is likely to cause inequities and seriously disrupt market incentives that otherwise would automatically direct available crude oil to the most efficient refiners. An allocation program also may transfer the burden of a crude oil shortfall from one refiner to another, and perhaps from one which has done the least to provide against such a shortage to one which has done the most.

We strongly recommend, therefore, that any allocation program be implemented only when the U. S. is experiencing at least a 20% reduction in crude oil supplies for at least two consecutive months. We also recommend that the order implementing any such program automatically expire within a short, predetermined period from its effective date. Without assurance that the program would only be of very short duration, it is likely refiners would begin arranging foreign purchases and other aspects of their business to respond to the disincentives inherent in any allocation scheme, which could ultimately lead to worse supply problems for the U. S. than would have been caused by the original loss of crude oil.

In the event that more than a 20% loss of crude oil supplies occurred, the following program is proposed.

The allocation of crude oil under the standby program should result in the most efficient utilization of available crude supplies. The buy/sell program should be eliminated, and all refiners, regardless of size, should come under the new allocation program. It is grossly unfair

to choose a few refiner-sellers to bear the entire burden of an allocation program. There is no statutory justification for doing so. Even in an emergency, it is doubtful that the U. S. Constitution would permit an arbitrary classification of certain refiners as sellers based on a single factor such as refinery capacity.

Any economic environment requiring the implementation of a mandatory crude oil allocation program must provide for available crude oil to be directed to efficient refiners. We were pleased to see that the ERA has indicated that there is merit for a refiner having downstream conversion capacity to produce high-demand products. Although the term "efficient refiners" was not defined, Marathon's proposed definition would be: refiners which are capable of producing maximum quantities of gasoline, diesel, home heating oil, aviation fuel, kerosine, and petrochemical feedstocks. These products can only be derived from a liquid hydrocarbon source and provide the lifeblood of the country from both an economic and national security viewpoint. Heavy liquid fuels which are used for stationary boiler heating and power generation have alternate sources available, such as coal or nuclear. Therefore, Marathon does not consider such products to be within our definition of an efficient refiner. The method of crude allocation under this program should provide an incentive for refiners to increase efficiency by upgrading their plants to handle a wider range of crude types and to produce a higher percentage of the high-demand products defined above.

Our appendix recommends a method for determining refining efficiency using data available from Form EIA-87 titled "Refinery Report" and Form ERA-59 titled "Standby Mandatory Crude Oil Allocation Program Report",

which are submitted monthly. We believe these forms can be used as a basis for allocation to efficient refiners without regard to size. Those inefficient refiners who by their unique location or product yield merit exceptional relief could apply for an exception. However, such exceptions should be granted only when overwhelming evidence is produced of a unique demand for those refineries' output. By virtue of designating all refiners as either buyers or sellers, based only upon crude availability and plant efficiency, there is no need for exception relief under the program.

However, in order to prevent the building of small inefficient refineries, it is recommended that any refinery under 30,000 barrels per day that was not irrevocably committed to expend prior to August 24, 1977 an amount equal to 20% of the total cost of the refining capacity should be excluded from the program unless that refiner suffers a crude supply loss in excess of 50% of its refinery capacity.

The allocation program must be designed to encourage refiners to aggressively pursue new crude supply sources. In order to accomplish this, we have two proposals. First, foreign spot crude should be excluded from the allocation program. Spot crude is available to any refiner. The business decision to enter the spot market is based upon such parameters as refining configuration and customer relationships. Any company entering the spot market should neither be rewarded through a contribution from other refiners whose average crude cost is lower nor be penalized by being required to sell that crude to another refiner at a price less than it paid for it. Any company purchasing such spot crude should have the privilege of running it in its own refinery.

Second, we recommend that the program encourage refiners to aggressively pursue new supply contracts. It is Marathon's recommendation that all those designated as refiner-buyers should be limited to purchase seventy-five percent (75%) of that amount necessary to raise their utilization to the national level. Additionally, refiner-sellers should be required to sell only seventy-five percent (75%) of that amount necessary to lower their utilization to the national level. This method would provide incentive for both refiner-buyers and refiner-sellers to secure term crude supply contracts or to enter the spot market.

The pricing provisions recommended by Marathon are based upon the program being extremely limited in duration. Pricing of a direct sale of crude under an allocation program is extremely difficult. Any barrel allocated away from a refiner-seller can only be replaced by purchases in the spot market. Therefore, in order to maintain customers at prior volumes, the refiner-seller must pay a much higher price for the replacement barrel. The allocation of crude oil away from any refiner-seller to a refiner-buyer is simply an assumption by the refiner-seller of the refiner-buyer's failure to procure crude for processing for delivery to his customers.

An allocation program which lasts for more than a few months where crude is transferred at less than replacement cost will severely undermine the country's ability to compete effectively for world crude supplies. If an individual refiner or class of refiners believes it simply cannot compete without a subsidy of below cost crude oil, it should apply, as Chrysler has, for a direct government bailout. In that way, the public policy decision in such a bailout can be fully aired and the full public, rather than a few refiner-sellers, can bear the cost of what, allegedly, would be a program to benefit that public.

It also makes it likely that the program will be challenged on constitutional grounds as being a "taking" from refiner-sellers without just compensation or as an unequal application of the law.

However, Marathon recognizes that a severe national emergency may call for drastic measures to cure a short-term crisis. In this environment, Marathon recommends the price of all crude transferred under the program be the sum of:

1. the acquisition cost at the time of transfer for that particular type of crude,
2. actual transportation charges, and
3. a reasonable increment to cover the loss of return on the seller's assets as a result of not having this crude to process through his plant.

The term "acquisition cost" as used in this particular context is defined as the actual cost to the seller under the terms of the supply contract covering the purchase of the particular type of oil delivered. This definition covers all grades and types of oil whether domestic or imported which come under Marathon's proposed program, except spot crude, which is excluded. Therefore, there should not be any significant difference in crude costs other than quality and gravity considerations. Requesting the refiner-buyer to pay actual acquisition cost under this definition puts him in the same position as the refiner-seller which had some access to non-spot crude oil.

The inclusion of an additional increment to partially compensate the loss to refiner-sellers of allocated crude oil has been recognized by the ERA in other regulatory proceedings. The ERA has seen fit to grant resellers

25¢ a barrel as a return for their efforts in reselling crude oil, yet only 5¢ a barrel is granted refiner-sellers although, in addition to their reselling effort, they suffer a loss on their refining investment due to not having the allocated crude oil available for processing. A more equitable figure which would only partially compensate refiner-sellers would be on the order of \$1.25 to \$1.50 per barrel. This minimal figure reflects only the recovery of capital costs in today's economic environment.

In addition, by excluding spot crude oil, the suggestion of giving a refiner a debit or credit through the entitlement program on the basis of his crude cost relative to a national average crude cost is unnecessary. Under the recommended proposal, the violent differences in average crude cost will disappear when spot crude costs are eliminated.

In summary, the major points of the plan Marathon proposes are as follows:

1. Available crude would be directed to efficient plants. The proposal provides for the inclusion of efficient refining capacity additions to the nation's refining industry and also provides an incentive for refiners to install additional conversion equipment to produce high-demand liquid fuels.
2. It retains in the hands of private enterprise the decision to enter the spot market. Efficient refiners may be able to economically purchase spot crude at a higher market clearing price. Thus, the purchase of such crude will provide the maximum national benefit. It also enhances competition because decisions on pricing and market share will be made on

the basis of incremental refining margins and continued customer relations.

3. It preserves the incentive to seek and acquire new term supply contracts by allowing refiner-sellers to run at a higher rate than refiner-buyers.

Very truly yours,

A handwritten signature in cursive script, appearing to read "V G Beghini". The signature is written in dark ink and is positioned below the typed name "VGB:lj".

VGB:lj
Att.

APPENDIX

Standby Mandatory Crude Oil Allocation Program
Implementation Plan

This plan utilizes the following government reports:

1. EIA-87, Refining Report

Due on the fifteenth workday of each month.

2. ERA-59, Standby Mandatory Crude Oil Allocation Program Report

Due on the tenth calendar day of each month.

Note: This form must be modified so as not to include in crude runs to stills spot purchases. Also, the form must be lengthened to include a crude runs to stills forecast for a three-month period.

1. Applicability

- A. This program becomes effective only after the United States experiences a twenty percent (20%) shortfall in crude supplies for two consecutive months. The shortfall shall be determined by comparing national crude runs to stills in each current month with national crude runs to stills from the same month in 1978.

- B. This program shall immediately terminate when it is determined that the United States is no longer experiencing a twenty percent (20%) shortfall.

- C. This program applies to all U.S. refiners, including the District of Columbia, Puerto Rico and the territories and possessions of the United States.

- D. The buy/sell program set forth in Section 211.65 shall immediately terminate after the Standby Program becomes effective. Any subsequent shortfall in crude supplies for any refiner must be handled through the Standby Program.

- E. All foreign spot crude shall be excluded from this program.

- F. Any refiner with certified refining capacity of less than 30,000 barrels per day that had not expended or was irrevocably committed to expend prior to August 24, 1977 an amount equal to at least twenty percent (20%) of the total cost of its refining capacity, shall be excluded from

this program unless it can show that it will suffer a crude supply loss in excess of 50% of its certified refining capacity.

2. Method of Allocation

A. General rule. In each allocation period a buyer shall be entitled to purchase and a seller shall be required to offer for sale an amount of crude oil equal to 75% of the difference between:

- i. the national estimated crude runs to stills multiplied by the ratio of a refiner's efficient refining capacity to the national efficient refining capacity and
- ii. the refiner's estimated crude runs to stills during the allocation period excluding foreign spot crude.

B. Formula

$$X = \left[A \left(\frac{C}{B} \right) - D \right] .75$$

C. Definitions

X = Quantity of crude oil a refiner is entitled to purchase (if X is positive), or required to sell (if X is negative).

A = National estimated crude oil runs to stills for the allocation period. Represents summation of all individual refiner's estimated crude runs.

B = National efficient refining capacity. Equal to the sum of all refiners' efficient refining capacity.

C = Individual refiner's efficient refining capacity which shall be calculated by multiplying each refiner's certified refining capacity as reported in Section B01-G of Form EIA-87 by the refiner's efficiency factor calculated as:

$$\frac{L}{V} \text{ where:}$$

L = Volume of light products, defined as:
 EIA-87, Refining Report Code 999
 Column "Production During Month,"
 less the sum of:

<u>Item</u>	<u>Code</u>
No. 4 fuel oil	414
Residual fuel oil	511
Asphalt	900
Wax	061,071,081
Coke	021,022
Road oil	031
Still gas	044
50% of unfinished oils	813

V = Total Input (Total Input Code 999)

D = Refiner's estimated crude oil runs to stills during allocation period. Excludes all foreign spot crude.

3. Calculation Procedure. For each allocation period, the amount of crude oil a refiner is eligible to buy or required to offer for sale shall be calculated as follows:
 - A. Each U.S. refiner shall submit monthly to the ERA on Form ERA-59, "Standby Mandatory Crude Oil Allocation Program Report," its estimate of crude oil runs to stills for each month of the allocation period, excluding any foreign spot crude.
 - B. For each allocation period, the ERA shall compute the national estimated crude oil runs to stills which shall be the summation of each individual refiner's estimate.
 - C. The ERA shall calculate each individual refiner's efficient refining capacity by averaging the three months of 1979 representing that refiner's most efficient refining months. This shall be that refiner's efficient refining capacity for the duration of the program.

1. A refiner that has upgraded or added capacity thereby changing efficiency may file with the ERA to change his efficient refining capacity.
 2. Where new or upgraded capacity comes on stream at the start or during this program and historical data to judge efficiency does not exist, a report shall be prepared attesting to the efficiency of the plant under normal operating conditions. The efficient capacity shall be based upon this report.
- D. For each allocation period, the ERA shall compute the national efficient refining capacity which shall be the summation of each individual refiner's efficient refining capacity, as computed in C above.
- E. For each allocation period, the ERA shall calculate the ratio of each refiner's efficient refining capacity to the national efficient refining capacity.
- F. For each allocation period, the ERA shall multiply the ratio of each refiner's efficient refining capacity to the national efficient refining capacity by the national estimated crude oil runs to stills to determine that refiner's allowable crude oil runs to stills.

G. For each allocation period, the ERA shall subtract the refiner's estimated crude oil runs to stills from the refiner's allowable crude oil runs to stills during the allocation period and multiply the result by .75 to determine the refiner's purchase or sales obligation.

- i. If the result of the calculation is positive, the refiner is entitled to purchase that quantity of crude oil.
- ii. If the result of the calculation is negative, the refiner is required to offer that quantity of crude oil for sale.

4. Adjustment to Purchase and Sale Amounts

- A. The ERA shall recalculate the buy/sell list for each allocation period based upon actual crude oil runs to stills including the crude purchased under this program. The ERA shall make appropriate adjustments in the subsequent allocation period to reflect what each refiner's sale or purchase amount should have been based upon actual crude runs to stills as reported on EIA-87.
- B. The ERA shall deduct crude sold under an allocation order outside this program from estimated crude runs to stills for a refiner-seller and add crude purchased to estimated crude runs to stills for a refiner-buyer for purposes of calculating the refiner's position in any allocation period. Under no circumstances shall an allocated sale lower a refiner's utilization rate to less than the rate

he experiences after meeting his obligation under this program.

5. Pricing. The price at which crude must be sold under this program shall be the sum of the following:

A. The acquisition cost of the crude, whether imported or domestic, defined as the actual cost to the seller under the terms of his supply contract at the time the actual transfer of crude ownership takes place between the buyer and seller in this program. Acquisition cost shall be based only upon a refiner's contract crude and not upon spot purchase prices.

B. Actual transportation charges incurred by the seller.

C. An increment of \$1.50 per barrel.

6. Other Definitions

A. Allocation period. A three calendar month period.

B. Crude oil runs to stills. The total number of barrels of crude oil input to distillation units processed by a refiner for its own account and the number of barrels processed for its account by other refiners, measured in accordance with Form EIA-87.

- C. "Estimated crude runs to stills." The volume of crude oil a refiner estimates it will process for its own account during an allocation period for all of its refineries, the volume of crude to be processed for non-refiners, and the volume of crude to be processed for the refiner's account by other refiners. A refiner's estimated runs to stills shall be based on the volume of its total crude oil supply excluding all foreign spot crude.
- D. Total crude oil supply. Consists of the total quantity of crude oil to which a refiner has access during an allocation period, including but not limited to, crude oil owned, controlled or purchased by the refiner located in owned or non-owned storage facilities excluding all foreign spot crude, pipeline fill and bottoms.
7. Buy/Sell Notice and Negotiations of Transactions
- A. A buy/sell notice shall be published at least seven (7) days prior to the beginning of the allocation period. The list shall set forth the quantity of crude oil each refiner is eligible to purchase and the quantity of crude oil each seller shall be obligated to offer for sale.

- B. Upon publication of the notice, buyers and sellers shall negotiate purchases and sales of crude oil pursuant to the notice. All sales must be arranged within 10 days after the publication of the buy/sell notice and all deliveries must be completed during the allocation period.

8. Terms and Conditions of Sales

- A. The terms and conditions of each sale shall be consistent with normal business practices.
- B. Seller shall deliver crude oil purchased pursuant to this program to any refinery designated by the buyer whether or not it is operated by the buyer.
- C. Crude oil offered for sale must be suitable for processing in the buyer's refinery or the refinery designated by the buyer provided that the refinery so designated does not require a higher quality of crude oil than the buyer's own refinery or refineries. Crude oil is deemed to be suitable for processing in a refinery if it has historically been processed in the refinery or if it has the same or similar characteristics as crude oil that has been historically processed in the refinery. A seller may not be required to supply a specific type of crude oil to a buyer's refinery

if the crude oil supplied would account for a greater percentage of the refinery's total crude runs to stills in the allocation period than was the case with similar quality crude oils during the previous 24-month period. A buyer must accept a sales offer where the crude offered for sale is suitable for his refinery. Rejection of a sales offer shall result in the forfeiture of the buyer's rights under the program.

- D. Crude oil offered to a buyer must be practical for a delivery to and physically capable of being delivered to the buyer's refinery. The buyer and the seller shall make mutually satisfactory arrangements for delivery of the crude.

9. Failure to Negotiate Transactions

The buyer shall make his best effort to consummate purchases of crude oil under this program from sellers prior to requesting assistance from the ERA. A buyer that is able to demonstrate its inability to consummate a purchase despite making such effort may request the ERA to direct one or more sellers to sell a suitable type of crude oil to such buyer. Such a request must document the inability to purchase oil from sellers.

EXHIBIT B

LIGHT PRODUCT LOSS DUE TO BUY/SELL PROGRAM

The volume of light products lost by allocating crude oil from generally efficient refiners to generally inefficient refiners under the Buy/Sell Program was 21 million barrels, or almost 900 million gallons, during the April 1979-March 1980 period. This light product loss amounts to about 18% of each barrel allocated. The loss occurs because refineries owned by refiner-sellers are generally more efficient and sophisticated in their mechanical configuration than plants owned by refiner-buyers.

To measure the light product loss, an analysis was made of the mechanical configuration of every refinery owned by refiner-buyers and refiner-sellers.¹ A total capacity was found for each type of conversion unit for buyers and for sellers. By applying the product yields of each type of unit to the composite capacities, overall product yields were derived for buyers and for sellers. Maximum gasoline production was assumed.

Note that the analysis seems to show that buyers are more efficient in the production of jet fuel, diesel fuel, and home heating oil than are sellers. However, drawing this conclusion would be misleading because sellers have the flexibility to sharply increase the yields of these products (at the expense of gasoline yield) if market demand requires. On the other hand, buyers generally do not have the flexibility to produce more gasoline.

¹Oil and Gas Journal, March 26, 1979
Trends in Refining Capacity and Utilization, U.S. Department of Energy,
September 1979.

LIGHT PRODUCT* LOSS DUE TO
BUY/SELL PROGRAM
APRIL 1979 TO MARCH 1980

*Definition:

Light Products Include The Following:

Liquefied Petroleum Gases (LPG's) - Primarily Propane
Motor Gasoline - All Grades
Jet Fuel - All Grades (Commercial & Military)
Kerosene
Domestic Light Fuel Oil and Diesel Fuel

Crude Oil Allocated to Buyers:

April thru September 1979	40.78 Million Barrels
October 1979 thru March 1980	78.08 Million Barrels
Total Allocated	118.86 Million Barrels

Light Product Yield Of Allocated Crude Oil - Millions of Barrels

	<u>Buyers</u>	<u>Sellers</u>
LPG's	1.65	3.83
Motor Gasoline	28.38	57.34
Jet Fuel	11.13	4.75
Kerosene	4.75	4.75
Lt. Heating Oil/Diesel	<u>30.24</u>	<u>26.55</u>
Totals	76.15	97.22

Light Product Loss	= 97.22 - 76.15
	= 21.07 Million Barrels
	= 885 Million Gallons

Light Product Loss Per Barrel of Allocated Crude Oil

=	21.07
=	<u>118.86</u>
=	17.7%

Mr. MAGUIRE. Thank you very much. Mr. Steenberg.

STATEMENT OF LAWRENCE STEENBERG

Mr. STEENBERG. I will try to eliminate the parts of my statement which have been previously stated. Up to the last witness, I agreed with everybody.

I am Larry Steenberg. I would like to open my comments today with a brief commercial for the small refining industry. The small refiners and the independent refining sector have gotten bad press recently, principally as a result of the regulatory programs which were just addressed, many of which had been substantially corrected to the reasonable satisfaction of many of us in recent years.

However, if we concentrate on this one area of the small refining industry, I think we distort the true picture of the small independents' contribution to the industry and the country.

Small refiners do not try to be small models of Exxon or any other large, integrated oil company. There are several significant differences between a small refiner and its large competitor. They are designed to serve a less gasoline-oriented market which is reflective of the fact that the petroleum industry has a whole spectrum of products including lube oil, solvents, and petrochemicals, and defense fuels.

For example, the eighth largest producer of benzene in the world is a small refiner.

Many small refineries were designed to produce products of this kind. If we allow small refiners to go out of business, I think we will learn that large, sophisticated refiners will meet the demand by producing these same products in an uneconomical fashion.

Small refiners tend to support small rural markets not supported by anyone else in the industry. Small refiners tend to be operated by the people who own them. As a result of that, they are inclined to take larger risks than some of their more conservative competitors.

As an example of that, we have prepared a list and attached it to our testimony. It was an independent who was the first company to install advances in petroleum technology during the last 35 or 40 years. If you go over this list, you will see each new advance in technology has first been put into operation by the small refiner. The heart of a large, modern refinery is its catalytic cracking process. The first modern cracker was put onstream by a company called Root Refining, a small refiner located in El Dorado, Kans., in 1943.

The heart of the means by which we produce unleaded gasoline today is called catalytic reforming. The first one was put on line by Old Dutch Refining, a small refiner located in Muskegon, Mich., in 1949.

The first modern high-pressure cracker was put on line at Power Oil Co., a small refiner located in Santa Fe Springs, Calif., in 1962.

The first unit for the extraction of benzene, which is a petrochemical feedstock, was put on line by a small refiner in 1952.

This indicates that small refiners are willing to take the big gamble to do something which is untried or unproven. I am sure there is an equivalent list of small refining companies worldwide whose try led to their demise.

We would like to suggest a refinery policy consisting of three things. The first has to do with what everybody has talked about, crude access. If we cannot fix that problem, it is not worth discussing any of the other problems, because that problem simply overrides every other consideration. We believe that national refining policy should include an affirmative statement that crude access at equitable prices is the policy of the country. We believe crude access can be achieved by two programs: First, that the tax code be revised to provide incentives for those sufficient in crude oil to distribute it to the rest of us. Second, we support a Government standby program. This would not be a program operating all the time, but only when certain events occur. I think I would find myself on the side of Mr. O'Leary in activating that program prior to a crisis, rather than after the crisis has come.

The second element of refining policy is a tariff on imported products. I believe every reason, save one for which we support that, has been alluded to. This country's capacity cannot compete if the foreign capacity can operate without imposition of the social requirements imposed on domestic refiners.

We are interested in protecting the domestic industry. We believe not only are their costs are too high, but also that there is an incentive for crude sufficient international companies to use foreign refining capacity due to the effects of one section of the U.S. Tax Code. If we revise this section correctly, not only will crude flow more easily to this country, but also incentives will exist which will lead to distribution of this crude to the U.S. independent refining industry. This is the tax incentive which I alluded to when I was discussing crude oil access earlier.

Finally, we believe refinery policy should include other parts of the Tax Code which would encourage the investment that needs to be made in upgrading the refineries.

We have submitted as part of our formal testimony a tax proposal which includes provisions for accelerated depreciation, additional investment tax credits for certain investments in refinery capacity, additional investment tax credits for investments in energy conservation, and some faster writeoffs for pollution control equipment. [See p. 135.] We feel these programs should be backed up with a Federal loan guarantee to make sure the capital is available to make the investments. We feel if these three parts are put together, we can have a healthy refining industry.

[Testimony resumes on p. 172.]

[Mr. Steenberg's prepared statement and attachments follow:]



AMERICAN PETROLEUM REFINERS ASSOCIATION

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Written Testimony of APRA
 Before the House Interstate and
 Foreign Commerce Committee
 Subcommittee on Energy and Power
 December 17, 1980

I. Overview

Throughout history, small and independent refiners have played a vital role in the development of this nation's domestic refining industry. Indeed, many of the current members of the American Petroleum Refiners Association (APRA) have contributed to the development of this nation's domestic refining industry for more than fifty years. It is the small and independent refiner, and not the multi-national integrated oil company which truly represents domestic refining. Congress should recognize that the refining capacity of international oil companies is predominantly foreign in nature. Only one-fourth of both Exxon and Shell's respective refining capability is located in the United States. Mobil and Texaco have only one-third of their respective* total refining capacities in this country. APRA is proud that its members are exclusively U.S. refiners. See Appendix A.

For the past twenty years, the federal government has recognized the important contributions of small and independent refiners by attempting to ensure the continued competitive viability of this segment of the industry. Nevertheless, in the past several years, certain journalists and public

"FOSTERING THE INTERESTS OF SMALL REFINERS"

policy spokesmen, as well as special interest groups, have unnecessarily criticized and inaccurately characterized small and independent refiners. Much of this criticism has resulted from the size of the small refiner bias program. However, continued criticism of one aspect of a regulatory program which has already been significantly reduced does a disservice to the majority of small and independent refiners in this country. Such dated and exaggerated criticism ignores both the legacy of service as well as the vital functions played by small refiners in the domestic refining industry.

Indeed, it is interesting to note that among the ten largest refiners in the United States, 70 percent of the actual refineries that these firms control would qualify as small refiners if they were independent entities. These refineries process 33 percent of the total crude oil run by these major integrated companies. Moreover, a full one-third of the refineries in question would qualify for membership in APRA because their capacities are 50,000 barrels per day (bpd) or less. See Appendix B. In view of this data, it is ironic that it is always the independent small refiner, and never the captive small refinery owned by these major firms, which must reply to allegations that their facilities are inefficient and lack adequate economies of scale.

Any analysis which assesses the need for small refiners by comparing them with the refining divisions of major integrated

oil companies is misplaced. Small refiners have remained competitive and been a vital component of the domestic refining industry because they serve specific and unique purposes and perform functions which differ from those performed by substantially larger refineries. There are several very specific reasons that the continued competitive viability of smaller refiners must be an important element of any future national energy policy. Small and independent refiners, which are located throughout the different regions of this nation, often serve rural and agricultural markets which are not only difficult to reach, but which, in many instances, have been abandoned by the major oil companies for this very reason. By way of illustration, one major oil company has recently begun to withdraw from markets in many northern tier states in order to concentrate its efforts in more profitable, populated geographic areas. Indeed, consolidation in the markets served by larger refineries has prompted the formation of agricultural cooperatives to purchase refined petroleum products so that these essential supplies will be provided at reasonable cost to their members located in agricultural areas abandoned or not fully serviced by the major companies. In addition to this willingness and ability to serve distinct geographic market areas, it is the small refiner which has often displayed the willingness to undertake the risks associated with installing and developing new and innovative refining technology in order to make their facilities more competitive. Among the revolutionary advances in refining

technology that were first installed by small refiners were the first hydrocracker as well as the first alkylation units. See Appendix C. Small refiners have also historically provided highly specialized refined petroleum products which larger integrated refiners are reluctant to produce because of the limited market for such products. For instance, it is the small refining segment of the industry which produces such products as asphalt, military jet fuel, lube oil, printing inks, and speciality chemicals which serve vital functions in the industries in which they are utilized.

Small refiners also play an important role in ensuring our national security. As a matter of fact the PADD districts presently utilized by DOE were originally established during World War II for security reasons. To allow an overconcentration of domestic refining facilities in very large refining complexes could cripple our national economy if only a few of these facilities were incapacitated. Small refiners are dispersed over many geographic regions. The danger associated with centralization, which is inherent in allowing dependence upon a limited number of large refining facilities, has been painfully experienced by the nation of Iran in recent months, which now imports petroleum products due to the destruction of its Abadan refinery. The destruction of the Abadan complex has also prompted a recent rise in the spot market prices of residual fuel oil in the Western European markets that depended upon that refinery for supply.

Small refiners also currently provide the Defense Department with close to 40 percent of the military jet fuel requirements necessary to maintain our military forces. To shift this important responsibility to the majors would displace capacity devoted to gasoline further exacerbating supply difficulties in these markets.

Small and independent refiners employ many highly skilled individuals. According to labor sources within the industry, it requires 12 refinery workers for each thousand barrels of crude processed daily. Small and independent refiners, which constitute approximately four million bpd of this nation's total domestic refining capacity, therefore directly support nearly 50,000 workers. In addition, countless other independent employees involved in the production of crude oil used by small refiners, as well as the jobbers involved in the transportation and marketing of the petroleum products which result, are dependent on the continued competitive viability of small and independent refiners. Moreover, the state and federal tax revenues generated, and the economic survival of the numerous small communities where these refineries are located, reinforce the need to maintain the competitive viability of this industry segment.

Small refiners also represent an important element of competition for the major oil companies. In the absence of such competition, there is little to prevent these international

firms from adding to their foreign facilities if the costs of refining in this country, due to such factors as environmental costs and higher wages, are greater than exist abroad.

APRA believes that there are four necessary and essential components for future national refining policy. These components include the following:

- (1) Assurance of an equitable supply of crude oil at competitive prices for all domestic refiners;
- (2) The enactment of a tariff on imported petroleum products;
- (3) A standby federal crude oil allocation program to be activated only under specifically defined circumstances such as a crude oil shortage or a sudden supply interruption;
- (4) A specific program of tax benefits and loan guarantees designed to assist the entire domestic refining industry to modernize and upgrade its facilities, increase capacity and improve efficiency and productivity.

The phased decontrol of crude oil prices has already caused a reduction in the number of small refining companies serving

the U.S. market. Some attrition was expected and is likely to continue. The four proposals listed above are the product of careful thought and are not designed to encourage the construction of new, unsophisticated small refineries. Rather, the thrust of these proposals is to establish a strong, well-balanced domestic refining industry capable of producing the type of refined products our country needs. APRA has taken the lead in this regard because much of the needed investment must be made in the smaller (under 50,000 bpd) refinery.

A further explication of each of these separate elements is discussed below.

II. The Federal Government Has Historically Insured The Viability of Small Refiners

Critics of small and independent refiners often ignore the long history of the various benefits the federal government has accorded this segment of the industry in order to maintain its competitive viability.

Federal programs to assist independent refiners have been an integral element of this nation's energy policy for many years. The evolution of these programs began in the 1950's when the United States initially recognized its growing dependence on foreign oil imports. The first formal effort by this country to control its level of oil imports occurred on July 29, 1957, when President Eisenhower accepted the report of his Special

Committee to Investigate Crude Oil Imports. This report recommended that national crude oil imports should not exceed 1,031,000 bpd, an amount which represented a level of imports equal to approximately 12 percent of the domestic production at that time.

A voluntary compliance program was then adopted to achieve this goal, but it failed to attract the necessary level of cooperation within the industry. As a result, on March 10, 1959, President Eisenhower issued Executive Order No. 3279 which abolished the voluntary program and established in its place a mandatory oil import program (MOIP).

The MOIP was based on a system of granting import quotas to all refiners and permitting exchanges as the means by which to allocate imported oil. The "historic" importers were cut back to 80 percent of their last allocation under the voluntary program and the remaining imports were then distributed to all refiners by the application of a sliding scale formula. The sliding scale allocations were cumulative so that every refiner, regardless of size, would receive the same allocation as a percentage of its first 10,000 bpd, of its second 10,000 bpd, and so forth. Moreover, this system resulted in a benefit to small refiners, since a small refiner's quota allocation constituted a greater proportion of its refinery runs than a large refiner.

The end result of the MOIP's sliding scale approach was to force large, integrated multi-national oil companies to share the advantages of the cheaper imports with independent producers and refiners. Exchanges were usually accomplished by a contractual agreement between an interior refiner which held an import quota and a coastal refiner which had access to foreign oil. The inland refiner agreed to buy a specific amount and type of foreign oil for delivery to the coastal refiner. In return, the tidewater refiner agreed to deliver a specific amount of domestic oil to the inland refiner. The "exchange" of oil was largely a matter of paperwork, since both the inland and coastal refineries continued to arrange for supplies from their customary sources.

The quota sharing aspect of the program was supported at the time by the Justice Department on the grounds that it would counteract concentration in the petroleum industry. Although stated with reference to residual fuel oil, Assistant Attorney General Lee Goevinger expressed what was believed to be the Department's attitude toward historic allocations.

Use of the historic pattern as the principal basis of allocation, other than for temporary purposes . . . [is] . . . antithetic to the normal process of growth and change through competitive efforts. By virtue of the competitive advantage in costs of imported over domestic residual, what changes in industry structure

do occur are in the direction of growing concentration and increasing domination by the principal historic importers.

An additional reason underscoring the need for quota guarantees was that the program helped to maintain inland independent and small refineries and thereby aided in the dispersement of refining facilities for national security purposes. The federal government recognized the vulnerability of the country during military attack if our domestic refining capacity was concentrated in a few large coastal locations. This vital national security factor continues to be an important reason for insuring the viability of the nation's small refiners.

The MOIP and the sliding scale allocation system continued in effect with few changes until 1973. It is interesting to note that in 1969 the Justice Department reiterated its support of regulatory efforts to aid the smaller segments of the petroleum industry in the interests of enhanced competition. Richard W. McLaren of the Antitrust Division announced that his office had designed a plan to prevent the special allocative powers of the integrated firms from affecting the ability of some segments of the industry to compete. According to McLaren's plan, a different distribution of product quotas, as well as the power that came with import quotas, would serve to prevent the major integrated firms from restricting competition.

Although flexible enough to last more than a decade, the MOIP was simply not equipped to deal with the cataclysmic disruption in the world and national petroleum markets that took place in the early 1970's, culminating in the Arab boycott of October 1973 and the subsequent quadrupling of world oil prices. On one hand, the energy policy embodied in the MOIP clashed with the Nixon administration's effort to control inflation through wage and price controls. Either prices had to rise to discourage consumption or import controls had to be adjusted to increase supplies. Furthermore, under the MOIP allocation system, the major advantage given small independent, inland refiners, namely their ability to exchange their import licenses for cheap imported oil for domestic crude, was virtually eliminated. This placed small independent refiners in direct competition with the majors for domestic supplies, and as a result pressure grew in favor of extending federal allocation controls to domestic crude oil. Public alarm over rising prices and concern with the possible existence of an oligarchy of major oil companies benefiting from the oil crisis created demands for a change in our national energy policy.

The first efforts to replace the mandatory quota program were embodied in a new license-fee system that extended existing import fees and granted certain exemptions to historical importers under the MOIP. Although the fees and exemptions were designed to become gradually more restrictive, thereby

providing greater protection for domestic production and refining, the license-fee system in the short-term represented a significant easing of controls on imports in an effort to resolve oil shortage problems resulting from the embargo. As was the case with earlier programs, the license-fee system also provided special treatment for small and independent refiners. Under the new system the Oil Import Appeals Board had authority to grant a 50,000 bpd fee-free allocation to be distributed to hardship cases, with a specific emphasis on small and independent refiners.

As stated above, the license-fee system, although initially increasing oil imports, was also concerned with the long-term problem of how equitably to distribute existing and future domestic crude oil supplies. On November 7, 1973, in an effort to further resolve this problem, the President requested the Office of Petroleum Allocation to prepare a plan for the distribution of all crude oil and refined products, and one day later he asked the Congress for authority to implement the plan. Three weeks later, Congress responded by passing the Emergency Petroleum Allocation Act of 1973 (EPAA) (P.L. 93-159). Contained within the EPAA was authority to freeze existing crude oil supplier/purchaser relationships and reallocated crude oil supplies among refiners. Specifically, the allocation system required refiners with crude supplies priced above the U.S. industry average to sell to those whose supplies were priced sufficiently below the average. It is evident

from the express objectives of the mandatory allocation provisions of the EPAA that the preservation of competitive small and independent refiners and the need to assure them adequate supplies were two primary considerations of the Congress under the Act.

(b)(1) The regulation under subsection (a), to the maximum extent practicable, shall provide --

(D) preservation of an economically sound and competitive petroleum industry; including the priority needs to restore and foster competition in the producing, refining, distribution, marketing and petrochemical sectors of such industry, and to preserve the competitive viability of independent refiners, small refiners, nonbranded independent marketers, and branded independent marketers;

...

(F) equitable distribution of crude oil, residual fuel oil, and refined petroleum products at equitable prices among all regions and areas of the United States and sectors of the petroleum industry, including independent refiners, small refiners, nonbranded independent marketers, branded independent markets, and among all users;

15 U.S.C. §§ 753(b)(1)(D) and (F).

As the shortage conditions that had existed during the Arab embargo began to abate, the demand for scarce petroleum products likewise fell and price again became the dominant force in the marketplace. Refiners who were dependent upon high-priced foreign crude oil found that they were unable to compete with other firms that had large supplies of cheaper domestic crude. The first response to this inequity came from the newly created cabinet-level Energy Resources Council, headed by Interior Secretary Rogers C.B. Morton. The Council advised the President to develop a crude oil cost equalization program to distribute crude oil acquisition costs equitably among all refiners. This "entitlements" program, as it came to be called, was embodied in a set of rules issued by FEA on December 4, 1974. Under this new regulatory framework, each refiner would receive entitlements for old, price-controlled domestic crude oil equal to the national average ratio of old crude oil to total crude runs to stills. Despite the emergency conditions prevalent at the time, the federal government once again recognized its commitment to small refiners. Refiners with less than 175,000 bpd runs to stills were to be given bonus entitlements on a sliding scale that was quite similar to the scale used under the old import quota program. The major difference in the two programs was that while the "price" of import quota tickets had been determined by market forces, the entitlements price was to be set by the FEA.

Support for the small and independent refining industry continued to be a matter of legislative concern within the nation's energy policy as reflected by provisions contained in the Energy Policy and Conservation Act (EPCA) (P.L. 94-163), which amended the EPAA. Specifically, Section 403 of the EPCA provided an explicit small refiner preference by exempting all refiners with a capacity of less than 100,000 bpd from purchasing entitlements on their first 50,000 bpd. Thus, once again Congress specifically provided the necessary legislation to protect the competitiveness of the small refiner.

As detailed above, efforts by the federal government to assure the competitiveness of small and independent refiners in one form or another have been an integral part of this nation's energy policy for the past two decades. Clearly this circumstance is the product of deliberate Congressional action to protect important national interests. These interests, such as the need for dispersing our refining capacity in the interest of national security, are as valid today as they were in 1959.

The elimination of the small and independent refining industry, and the subsequent impact it would have on the affected refiners, would cause permanent and significant changes in the refining industry. To eliminate the nation's small and independent refiners would signal the abandonment of a quarter century of Congressional support for an integral part of the modern

day petroleum industry, and it would be contrary to a sound national energy policy. Furthermore, such an attitude would signal to foreign nations that the United States is willing to rely increasingly upon imports of petroleum products.

III. Equitable Access to Crude Oil

The single most important element of future legislation regarding the domestic refining industry is a guarantee to existing small and independent refiners that they can be assured of equitable access to crude oil at competitive prices. In the absence of such a foundation for domestic refining policy, other goals such as upgrading and increasing existing refining capacity, providing incentives for such capital investments, and encouraging further technological and marketing innovations, become irrelevant. Without equitable access to sufficient volumes of available crude oil at competitive prices, no independent and small refiner will be able to survive.

During the past decade crude oil has been available at competitive prices a majority of the time. Nevertheless, it is equally clear that during those periods when the crude oil market has been distorted by aberrations such as the Arab oil embargo in 1973 or the sudden cessation of supplies from Iran, crude oil will not be available to small and independent refiners. Moreover, there can be no doubt that the issue of equitable access to crude oil will persist into the foreseeable

future. First, access to domestic crude oil for independent refiners will be increasingly difficult to achieve as current crude oil allocation regulations expire, because major international oil companies will retain their own captive domestic production, as well as bid up the price for available crude supplies that do appear on the market by subsidizing their refining operations from other divisions. Secondly, OPEC will undoubtedly continue to constrain the production of its crude oil supplies. Furthermore, the price of access to OPEC crude oil can be expected to include additional premiums, such as tie-in agreements requiring firms to also purchase refined petroleum products, of joint venture efforts with larger oil companies which will in turn assist OPEC in previously announced plans to expand its own refining capacity. Multi-national oil companies will also severely reduce, if not completely eliminate, third party sales. Finally, the multiple tier price structure for foreign crude oil, which was demonstrated in the Exception Application filed by the Union Oil Company in the summer of 1979, may well persist, resulting in an anti-competitive impact on those small and independent refiners which depend on one or two specific crude producing nations.

Recent events have also taught the small and independent segment of the refining industry that guarantees for access to available supplies of crude oil at equitable prices, in the form of long-term contracts with either foreign producers or

major integrated oil companies, do not constitute guarantees at all. At the time of the Arab oil embargo, small and independent refiners found their long-term supply contracts suddenly abrogated by the majors. Therefore, it is essential that the federal government develop a program which adopts as national policy the right for all existing refiners to obtain access to adequate and competitively priced supplies of crude oil. Legislation designed to effectuate this policy must also be implemented as soon as possible. If small and independent refiners are to plan for and obtain the necessary capital financing to increase their efficiency, upgrade their facilities, and continue to serve their existing markets, they must be able to prove to financial institutions in the very near future that they will have an assured access to competitively priced crude oil.

APRA believes that a program consisting of a standby allocation program, which would take effect in the event specifically defined circumstances occur in the market, coupled with economic incentives to encourage the sale of reasonably priced crude oil to small and independent refiners, present the best means to achieve this vital policy goal. Both of these proposals are discussed more fully below.

IV. Standby Allocation Program

APRA believes that a standby allocation program, to be implemented only upon the occurrence of a specific and detailed set of circumstances, is an essential element of national refining policy. This program must be adopted in order to equitably allocate crude oil if a supply shortage, relative to domestic demand, is caused by events either at home or abroad. APRA believes that in today's market a crude oil supply shortage equal to seven percent of national supply requirements would serve as an appropriate triggering mechanism for implementing the standby allocation program. This program should also be capable of being activated if distortions occur in the prices of crude oil available on the spot market, similar to the phenomenon which occurred in the summer of 1979.

APRA believes that it is incumbent upon Congress to fashion criteria which are as specific as possible in expressing Congressional intent regarding a standby allocation program for crude oil supplies. Under the DOE's existing Buy/Sell Program, as well as its mechanism for obtaining exception relief from the Office of Hearings and Appeals, there has been a great deal of controversy among affected parties at the administrative level regarding the specific Congressional intent behind the criteria utilized to assess a firm's eligibility to participate in these programs. APRA also recognizes that imperfections

in the program will, to a certain degree, be inevitable. However, such imperfections are certainly preferable to a situation in which Congress fails to adopt any standby allocation program at all. APRA also believes that such a program should be capable of redressing supply interruptions experienced by specific refiners inordinately affected by unanticipated events which disrupt individual firms' access to adequate crude oil supplies.

APRA would like to emphasize that its members are both willing and capable of competing with larger integrated oil companies for available supplies of crude oil, provided such competition is on an equitable basis. However, when the crude oil market's normal supply/demand mechanisms are distorted such that equitable access to supplies at competitive prices is impossible, it is the obligation of the federal government to intervene and provide for an adequate allocation program.

Finally, APRA has long believed that the best means to accomplish equitable distribution of crude oil is to provide for economic incentives for suppliers to make supplies available to small and independent refiners. Consistent with this belief, our Association is currently working on proposed revisions to the U.S. Tax Code to incorporate incentives for relatively crude sufficient companies to sell their supplies at competitive prices to crude deficient small and independent refiners. Such a system is far preferable to one of mandatory allocation

orders, and would insure a minimal amount of government regulatory interference in the marketplace.

A more detailed explanation of these proposals is included in Section VI of our written testimony.

V. Import Tariffs

APRA also feels that an import tariff on petroleum products should be an element of any future domestic refining policy. One common criticism of such an import tariff is that it constitutes protectionism which results in higher costs to the consumer. This Association believes such criticism is short-sighted, and APRA maintains that the long-term interests of the United States weigh heavily in favor of a tariff on imported petroleum products.

The decision to impose such a tariff will not be an easy political choice. Indeed, tariffs are never popular with consumers or with advocates of the theoretical advantages of unfettered world trade. Nevertheless, after all these arguments are carefully considered the case for a tariff remains a compelling one.

A tariff on petroleum products is necessary for several specific reasons. First, a tariff, provided that it is properly structured, will equalize certain cost advantages now held by foreign

refiners. These cost advantages are derived from added costs currently borne by domestic refiners which result from compliance with environmental regulations as well as the need to provide higher wages and a safer work place than required abroad. We do not oppose the goals which these social costs were designed to achieve. Congress and the American people have decided that certain standards and requirements such as those of the Environmental Protection Agency and the Department of Labor are important to the quality of life in the United States. In addition, petroleum products shipped from one region of the United States to another must be carried in Jones Act vessels manned by U.S. crews, which results in higher transportation costs for domestic refiners.

However, if the Congress of the United States, through these and other similar laws, raises the cost of refining a barrel of crude oil into marketable products in domestic facilities, it should accept the corresponding responsibility of ensuring that the U.S. domestic refining industry remains competitively viable with those foreign refiners, as well as the foreign refining facilities of the international oil companies, which do not have to bear the same social costs.

If no import fee or an inadequate tariff on imported products is in place, our nation will, in the years ahead, import not only foreign crude oil, but foreign refined product as well. This is a situation which the United States cannot allow to develop.

Petroleum refining is a process industry which provides the vital energy input to the rest of American industry. It is what an economist might classify as a "basic industry", along with such other industries as steelmaking and automobile production. Petroleum refining is not the type of industry which U.S. policymakers have the luxury of allowing other countries to assume responsibility for simply because it results in reduced costs to the American consumer. If a large percentage of our petroleum products were refined abroad, other nations would begin to dictate many of the day-to-day economic decisions now made in this country.

Petroleum refining is, like other basic industries, vital to U.S. economic, employment, and national security interests. As such, this industry must be sited in the United States where it can be protected from the conflicting and competing interests of other nations. It is also important that the bulk of U.S. refining capacity remain under the jurisdiction of U.S. laws, so that output can be directed in accordance with the national interest in time of war or a similar national emergency.

Nevertheless, at a time when most other basic American industries, such as steel, automobiles and petrochemicals, are afforded substantial degrees of protection under the customs laws of the United States, the domestic refining industry

remains for all practical purposes unprotected. As the history of U.S. import controls on petroleum illustrate, no license fee has been collected on imports of either crude oil or petroleum product since April 1, 1979. In our view, this is a classic example of how short-term political concerns over a few tenths of a percentage point in the Consumer Price Index can chip away -- bit by bit -- the foundation of a rational approach to a strong domestic refining industry.

Second, in the absence of a tariff, we believe several incentives exist, which as an unintended consequence of the decontrol of domestic crude oil prices, will encourage the diversion of foreign-produced crude oil, from U.S. facilities into foreign refineries.

Under the current entitlements program, which is designed to equalize the benefits of price-controlled domestic oil among domestic refiners, an entitlements benefit is created when a barrel of uncontrolled crude is run in a U.S. refinery. At its peak in May of 1980, when the weighted average disparity between controlled and uncontrolled crude exceeded \$27.00, the benefit associated with the program was \$6.22. This subsidy offered a major integrated oil company with foreign oil production, and both domestic and foreign refining capacity, a compensatory incentive for refining the high cost, uncontrolled, foreign barrel in a U.S. refinery. This entitlement benefit helped to neutralize the lower social and economic

costs associated with refining that same barrel in a foreign refinery.

But the advent of decontrol for the prices of domestic crude oil supplies will eliminate these incentives. The entitlements benefit is already less than \$3.50, and, as the value of an entitlement is gradually reduced, so too is the incentive for refining foreign oil in domestic refineries. If the entitlements program is ineffective as early as March or April of 1981, as many predict it will be, the incentive for domestic refining will disappear well in advance of the September 30, 1981 date for the expiration of crude oil allocation and pricing controls. If crude oil prices are immediately decontrolled by the incoming Administration, this same result will occur. Thus, in the absence of an offsetting fee on imported product, the lower economic and social cost advantages accruing to foreign refiners will result in many of the foreign barrels of crude previously destined for the U.S. refiners being refined abroad instead.

There is no doubt that this change can occur very rapidly, for a great deal of excess capacity in foreign refineries currently exists. The depressed product market is another incentive for foreign refiners to maximize their U.S. sales. In Western Europe, the London Petroleum Economist reports that there is now over 500,000 bpd of sophisticated cracking capacity under construction or firmly planned (of which about

300,000 bpd is catalytic and the remainder thermal or visibreaking projects) in addition to the various completions in recent years. The Economist's September 1980 world refinery survey establishes that in 1979 U.S. refineries ran at 82 percent of capacity, compared to 86 percent and 85 percent in the previous two years. The projected cutback in gasoline use during 1980 has caused U.S. utilization rates to fall to a low of 72 percent. But in Western Europe, capacity utilized in 1979 equalled only 69 percent, up slightly from 66 percent and 65 percent in the previous two years. In Italy the utilization rate earlier this year was only 55 percent. Utilization rates in the Caribbean during the last two years have only been in the 60-65 percent range.

When one combines the new sophisticated capacity in these areas, along with the lower utilization rates and the announced plans of certain OPEC nations to begin construction of new export refineries, some in joint ventures with large integrated U.S. oil companies, the likelihood of increasing product imports for this nation becomes a virtual certainty.

Finally, U.S. Tax law contains what we fear may be a powerful incentive for U.S. companies with both domestic and foreign refining capacity to refine abroad. By refining and earning income in a foreign country, a company increases the ceiling on the amount of foreign tax credits which can be used to reduce its U.S. income taxes. This built-in foreign refining

bias may, in the absence of an import tariff on products or similar or offsetting tax preferences for domestic refiners, encourage the export of U.S. refining capacity.

The establishment of a proper level for such an import fee is an exacting task. Last year, in testimony before the Senate Energy Committee in hearings on S. 1684, APRA supported a fee on imported product of \$.03 per gallon or \$1.26 per barrel. Given the demise of the entitlements program, the disappearance of the subsidy for domestically refined foreign crude, and the increasing costs of domestic crude to U.S. refiners, we feel that a substantially higher fee than \$.03 per gallon is justified. We stand ready to work with the staffs of this Committee as well as the House Ways and Means Committee to arrive at a fee which will provide an adequate level of protection for the domestic refining industry.

VI. Capital Creation

In 1978 the capacity of the U.S. refining industry was approximately 18 million barrels per day. Energy conservation and projections of slow economic growth during the 1980's contribute to estimates of sluggish demand for petroleum products during the next decade. And yet a tremendous amount of capital investment must be made by domestic refiners to upgrade and modernize their plant and equipment if even this level of demand is to be met.

Many U.S. refineries are not equipped to process streams of low gravity, high sulfur crude oil into environmentally acceptable products. Due to the growing scarcity of light sweet crudes, these refiners will be forced to upgrade their facilities in order to compete effectively for available crude oil supply.

Petroleum refining is a highly capital intensive industry. Huge amounts of capital are required to modernize or upgrade even the smallest refinery. This is why the American Petroleum Refiners Association has compiled and submitted to the Congress detailed tax incentives designed to encourage this needed modernization.

Desirable incentives should include:

- (1) A shorter, five to seven year depreciation life for refinery processing equipment;
- (2) An additional 10 percent investment tax credit for expenditures made on certain new refining equipment (e.g., sour crude processing equipment);
- (3) Increased investment credits for certain additional items of refinery equipment whose principal purpose is the conservation of energy consumed in the refining process. (An expansion of existing provisions contained in the Energy Tax Act of 1978);

- (4) Immediate write-off of certain obsolete refining equipment; and
- (5) Expensing of pollution control equipment.

We believe that these tax incentives should form an integral part of any comprehensive national refining legislation and we feel Chairman Dingell and other committee members should be fully apprised as to our efforts in this area. Appended to our written testimony is a full description of these tax incentives.

It is important to recognize that tax incentives alone cannot assure that the needed investment in refinery retrofitting will occur. Tax credits are of benefit only if refiners can obtain loans at a rate of interest sufficient to allow a profitable return on investment.

Obtaining the capital to modernize is impossible without access to crude oil at a competitive price. Our testimony has already addressed this important prerequisite in some detail.

The American Petroleum Refiners Association would also suggest that this committee explore the desirability of providing a federal loan guarantee program for those refiners with crude access who must upgrade and modernize to remain competitive. We would recommend that Title II of Senator Johnston's Domestic Refinery Policy Act, S. 1684, be used as a basis for such a loan guarantee program. It is important, however, that any loan guarantee program be designed to assist only needed upgrading in refineries where the necessary capital cannot be acquired through conventional means. Federal loan guarantees should target refiners for assistance who have planned upgrading to make better use out of the residual fractions of the barrel and enhance their energy efficiency and should not encourage the construction of unnecessary excess distillation capacity in the U.S.

Appendix A

APRA Membership by State

ALABAMA

CORAL PETROLEUM, INC.
Refinery: Cordova, AL

MARION CORPORATION
Mobile, AL
Refinery: Theodore, AL

MOBILE BAY REFINING COMPANY
Chickasaw, AL
Refinery: Chickasaw, AL

ARIZONA

LA JET, INC.
Phoenix, AZ

CALIFORNIA

GOLDEN EAGLE REFINING COMPANY,
INC.
Los Angeles, CA
Refinery: Carson, CA

GULF STATES OIL & REFINING
COMPANY
Beverly Hills, CA

LA JET, INC.
Los Angeles, CA

LUNDAY-THAGARD OIL COMPANY
South Gate, CA
Refinery: South Gate, CA

MARLEX OIL & REFINING, INC.
Long Beach, CA
Refinery: Long Beach, CA

POWERINE OIL COMPANY
Santa Fe Springs, CA
Refinery: Santa Fe Springs, CA

COLORADO

ASAMERA OIL (U.S.) INC.
Denver, CO
Refinery: Commerce City, CO

GARY REFINING COMPANY
Englewood, CO
Refinery: Fruita, CO

WYOMING REFINING COMPANY
Denver, CO

GEORGIA

YOUNG REFINING CORPORATION
Douglasville, GA
Refinery: Douglasville, GA

IDAHO

UNITED INDEPENDENT OIL COMPANY
Boise, ID

ILLINOIS

CALUMET INDUSTRIES, INC.
Chicago, IL

INDIANA

GLADIEUX REFINERY, INC.
Fort Wayne, IN

INDIANA FARM BUREAU COOP
ASSN., INC.
Hammond, IN
Refinery: Hammond, IN

LAKETON ASPHALT REFINING, INC.
Evansville, IN
Refinery: Laketon, IN

IOWA

PESTER REFINING COMPANY
Des Moines, IA

KANSAS

E-Z SERVE, INC.
Refinery: Shallow Water, KS

HUDSON OIL COMPANY, INC.
Kansas City, KS

PESTER REFINING COMPANY
El Dorado, KS
Refinery: El Dorado, KS

PIONEER REFINING, LTD.
Wichita, KS

LOUISIANA

BRUIN REFINING, INC.
Refinery: St. James, LA

CALUMET INDUSTRIES, INC.
Refinery: Princeton, LA

CANAL REFINING COMPANY
Church Point, LA
Refinery: Church Point, LA

CLAIBORNE GASOLINE COMPANY
Refinery: Lisbon, LA

CONSOLIDATED PETROLEUM
INDUSTRIES, INC.
Refinery: Lake Charles, LA

ERGON REFINING, INC.
Monroe, LA

FIELDS ENERGY REFINING COMPANY
dba/EVANGELINE REFINING COMPANY
INC.
Jennings, LA
Refinery: Jennings, LA

HILL PETROLEUM COMPANY
Refinery: Krotz Springs, LA

INTERNATIONAL PROCESSORS
New Orleans, LA
Refinery: St. Rose, LA

LA JET, INC.
Refinery: St. James, LA

MT. AIRY REFINING COMPANY
Refinery: Garyville, LA

PLACID REFINING COMPANY
Refinery: Port Allen, LA

SOUTH LOUISIANA PRODUCTION
CO., INC.
Lafayette, LA
Refinery: Mermentau, LA

T & S REFINING CO., INC.
Refinery: Jennings, LA

MICHIGAN

INDUSTRIAL FUEL AND ASPHALT
OF INDIANA, INC.
Grand Rapids, MI

LAKESIDE REFINING COMPANY
Southfield, MI
Refinery: Kalamazoo, MI

TEXAS AMERICAN PETROCHEMICALS,
INC.
Refinery: West Branch, MI

MISSISSIPPI

ERGON REFINING, INC.
Jackson, MS
Refinery: Vicksburg, MS

SOUTHLAND OIL COMPANY
Jackson, MS
Refineries:
Yazoo City
Sandersville
Lumberton

NEW JERSEY

SEAVIEW PETROLEUM COMPANY
Refinery: Paulsboro, NJ

NEW MEXICO

NAVAJO REFINING CO.
Artesia, NM
Refinery: Artesia, NM

TONKAWA REFINING COMPANY
Roswell, NM

NEW YORK

GULF STATES OIL & REFINING
COMPANY
New York, NY

OHIO

MT. AIRY REFINING COMPANY
Cincinnati, OH

OKLAHOMA

ALLIED MATERIALS CORPORATION
Oklahoma City, OK
Refinery: Stroud, OK

CANAL REFINING COMPANY
Tulsa, OK

GULF STATES OIL & REFINING
COMPANY
Tulsa, OK

HUDSON OIL CO., INC.
Refinery: Cushing, OK

OKC REFINING, INC.
Refinery: Okmulgee, OK

OKLAHOMA REFINING COMPANY
Oklahoma City, OK
Refinery: Cyril, OK

TONKAWA REFINING COMPANY
Oklahoma City, OK
Refinery: Arnett, OK

PENNSYLVANIA

SEAVIEW PETROLEUM COMPANY
Blue Bell, PA

SOUTH DAKOTA

WYOMING REFINING COMPANY
Rapid City, SD

TEXAS

BRUIN REFINING, INC.
Houston, TX

CARBONIT REFINERY, INC.
Houston, TX
Refinery: Hearne, TX

CLAIBORNE GASOLINE COMPANY
Dallas, TX

COPANO REFINING, INC.
San Antonio, TX

CORAL PETROLEUM, INC.
Houston, TX

CONSOLIDATED PETROLEUM
INDUSTRIES, INC.
Abilene, TX
Midland, TX

E-Z SERVE, INC.
Abilene, TX
Houston, TX
Refinery: Fort Worth, TX

FIELDS ENERGY REFINING COMPANY
dba/EVANGELINE REFINING
COMPANY
Houston, TX

FRIENDSWOOD REFINING
CORPORATION
Houston, TX
Refinery: Friendswood, TX

GUAM OIL AND REFINING, INC.
Dallas, TX

GULF STATES OIL & REFINING CO.
Houston, TX
Refinery: Corpus Christi, TX

VEDETTE ENERGY CORPORATION
Houston, TX
Refinery: Brownsville, TX

HILL PETROLEUM COMPANY
Houston, TX

HOWELL CORPORATION
Houston, TX
Refineries: Corpus Christi, TX
San Antonio, TX

INDEPENDENT REFINING CORPORATION
Houston, TX
Refinery: Winnie, TX

LA COSTE REFINING CORPORATION
San Antonio, TX
Refinery: La Coste, TX

LA JET, INC.
Abilene, TX
Houston, TX

MARION CORPORATION
Houston, TX

MT. AIRY REFINING COMPANY
Houston, TX

NAVAJO REFINING COMPANY
Dallas, TX
Houston, TX

OKC REFINING, INC.
Dallas, TX

PETRACO-VALLEY OIL &
REFINING COMPANY
Houston, TX
Refinery: Brownsville, TX

PIONEER REFINING, LTD.
San Antonio, TX
Refinery: Nixon, TX

PLACID REFINING COMPANY
Dallas, TX
Refinery: Mont Belvieu, TX

QUINTANA REFINERY COMPANY
Houston, TX
Refinery: Corpus Christi, TX

QUITMAN REFINING COMPANY
Houston, TX
Refinery: Quitman, TX

SABER REFINING COMPANY
Houston, TX
Refinery: Corpus Christi, TX

SIGMOR CORPORATION
San Antonio, TX
Refineries:
Three Rivers, TX
Corpus Christi, TX

SOUTH HAMPTON REFINING CO.
Silsbee, TX
Refinery: Silsbee, TX

SOUTHWEST PETROREFINING
Houston, TX
Refinery: Donna, TX

T & S REFINING CO., INC.
Houston, TX

TEXAS AMERICAN PETROCHEMICALS,
INC.
Midland, TX

TEXAS ARMADA REFINING CO.
Houston, TX
Dallas, TX

TIPPERARY REFINING CORPORATION
Houston, TX
Refinery: Ingleside, TX

WYOMING REFINING COMPANY
Houston, TX

WASHINGTON

UNITED INDEPENDENT OIL CO.
Refinery: Tacoma, WA

WYOMING

WYOMING REFINING COMPANY
Refinery: Newcastle, WY

DISTRICT OF COLUMBIA

INTERNATIONAL PROCESSORS
Washington, D.C.

PETRACO-VALLEY OIL & REFINING
COMPANY
Washington, D.C.

ASSOCIATE MEMBERS

ALEXANDER & ALEXANDER, INC.	MELLON ENERGY PRODUCTS COMPANY
DALCO PETROLEUM CORPORATION	MINRO OIL, INC.
E. I. DUPONT DE NEMOURS & COMPANY	NALCO CHEMICAL COMPANY
ENGELHARD MINERALS & CHEMICALS CORPOATION	THE ORTLOFF CORPORATION
ETHYL CORPORATION	OXIRANE CORPORATION
FEDCO OIL COMPANY	PPG INDUSTRIES, INC.
FIRST CITY NATIONAL BANK OF HOUSTON	THE QUARLES AGENCY, INC.
HOWE-BAKER ENGINEERS, INC.	ROLLINS BURDICK HUNTER AGENCY OF TEXAS, INC.
KNOX OIL OF TEXAS, INC.	SOUTHWESTERN GULF PETROLEUM COMPANY
	WEST TEXAS MARKETING

Appendix B



AMERICAN PETROLEUM REFINERS ASSOCIATION

607 RING BUILDING • WASHINGTON, D.C. 20036 • (202) 331-7081

MEMORANDUM

DATE: November 6, 1980

SUBJECT: SMALL REFINER INVESTMENTS IN INNOVATIVE
PETROLEUM PROCESSING.

Listed below are innovative technological advancements in petroleum refining along with the name of the refining company which first installed the processing unit.

<u>Name of Process</u>	<u>Company</u>	<u>Year Started Up</u>
First Thermal Cracker	A small refinery in Independence, Kansas, apparently owned by UOP	1913
First Poly Unit	Small refiner (unidentified) in Michigan	1936
First FCC Unit	Root Refining, Eldorado, Kansas	1943
First HF Alkylation Unit	Root Refining, Eldorado, Kansas	1943
First Platformer	Old Dutch Refining Muskegon, Michigan	1949
First Udex Unit	Eastern States Refining Houston, Texas	1952
First Hydrocracker	Powerine Oil Company Santa Fe Springs, California	1962
First Molex Unit	Union Texas Petroleum Winnie, Texas	1964

Energy Data Reports

Department of Energy
Energy Information
Administration
Washington, D.C. 20461



For information call Susan J. Harris
Telephone: (202) 252-5992

Petroleum Refineries, Annual

PETROLEUM REFINERIES IN THE UNITED STATES AND U.S. TERRITORIES

JANUARY 1, 1980

On January 1, 1980, there were 319 refineries in the United States with a total crude oil distillation capacity of 18.0 million barrels per calendar day and 19.1 million barrels per stream day, according to the Energy Information Administration, United States Department of Energy. During 1979, the number of refineries in the United States, excluding the territories, increased by eight while the capacity increased by 443,736 barrels per calendar day. The net increase of eight in the number of refineries was the result of the start-up of eleven and the dismantling of three during 1979.

Crude oil distillation capacities projected for January 1 of 1981 and 1982, show increases of 589,497 barrels and 554,747 barrels per stream day, respectively.

The projected average refinery input of crude oil and other feedstocks to refineries in the United States during 1980 is 17.2 million barrels per stream day. Increases projected for the next two years will bring the total daily average input to 18.8 million barrels in 1982. These increases in input are reflected in the increases in projected product yields. The current year's projected output of 16.2 million barrels per stream day is expected to increase to an average of 17.8 million barrels per stream day during 1982.

Shell storage capacity for crude oil and selected petroleum products at refineries on January 1, 1980, totaled 662,509 thousand barrels. Compared with January 1, 1979, crude oil storage capacity increased by 8,406 thousand barrels. Refinery working storage capacity, collected for the first time this year, is 587,351 thousand barrels.

Prepared September 5, 1980 in the Office of Oil and Gas Statistics

TABLE 1.- CRUDE DISTILLATION CAPACITY IN THE UNITED STATES, BY
REFINER IN DESCENDING ORDER: JANUARY 1, 1980

(BARRELS PER CALENDAR DAY)

<u>Companies controlling more than 100,000 b/d crude oil capacity:</u>		<u>Capacity b/d</u>
<u>Exxon Corp.</u>		
<u>Exxon Co. U.S.A.</u>		
Baytown, Texas	640,000	
Baton Rouge, Louisiana	500,000	
Linden, New Jersey	290,000	
Benicia, California	102,000	
Billings, Montana	<u>45,000</u>	
		1,577,000
<u>Standard Oil Co. of California</u>		
<u>Chevron U.S.A. Inc.</u>		
El Segundo, California	405,000	
Richmond, California	365,000	
Fascagoula, Mississippi	280,000	
Perth Amboy, New Jersey	168,000	
El Paso, Texas	76,000	
Honolulu, Hawaii	46,000	
Salt Lake, Utah	45,000	
Bakersfield, California	26,000	
Kenai, Alaska	22,000	
Willbridge, Oregon	15,000	
Baltimore, Maryland	13,500*	
Richmond Beach, Washington	<u>5,500</u>	
		1,467,000
<u>Standard Oil Co. of Indiana</u>		
<u>Amoco Oil Co.</u>		
Texas City, Texas	415,000	
Whiting, Indiana	380,000	
Wood River, Illinois	108,000	
Sugar Creek, Missouri	104,000	
Mandan, North Dakota	56,000	
Yorktown, Virginia	53,000	
Casper, Wyoming	48,000	
Salt Lake City, Utah	39,000	
Savannah, Georgia	18,000	
Baltimore, Maryland	<u>15,000</u>	
		1,236,000

* Although these refineries are normally shutdown on January 1, they are operated at or near capacity during the asphalt paving season.

TABLE 1.- CRUDE DISTILLATION CAPACITY
 REFINER IN DESCENDING ORDER: JANUARY 1, 1980 (Continued)
 (BARRELS PER CALENDAR DAY)

		<u>Capacity b/d</u>
<u>Shell Oil Co.</u>		
<u>Shell Oil Co.</u>		
Deer Park, Texas	285,000	
Wood River, Illinois	283,000	
Norco, Louisiana	230,000	
Martinez, California	104,000	
Wilmington, California	93,000	
Anacortes, Washington	91,000	
Odessa, Texas	32,000	
Gallup, New Mexico	<u>18,000</u>	
		1,136,000
<u>Texaco, Inc.</u>		
<u>Texaco, Inc.</u>		
Port Arthur, Texas	365,000	
Convent, Louisiana	140,000	
Westville, New Jersey	90,000	
Lawrenceville, Illinois	84,000	
Anacortes, Washington	78,000	
Wilmington, California	75,000	
Lockport, Illinois	72,000	
West Tulsa, Oklahoma	50,000	
Port Neches, Texas	47,000	
Casper, Wyoming	21,000	
Amarillo, Texas	20,000	
El Paso, Texas	<u>17,000</u>	
		1,059,000
<u>Gulf Oil Corp.</u>		
<u>Gulf Oil Co. U.S.</u>		
Port Arthur, Texas	335,800	
Philadelphia, Pennsylvania	206,300	
Belle Chasse, Louisiana	195,900	
Santa Fe Springs, California	51,500	
Toledo, Ohio	50,300	
Cleves, Ohio	43,700	
Venice, Louisiana	<u>28,700</u>	
		912,200
<u>Mobil Oil Corp.</u>		
<u>Mobil Oil Corp.</u>		
Beaumont, Texas	325,000	
Joliet, Illinois	180,000	
Torrance, California	123,500	
Paulsboro, New Jersey	98,000	
Ferndale, Washington	71,500	
Augusta, Kansas	50,000	
Buffalo, New York	<u>43,000</u>	
		891,000



AMERICAN PETROLEUM REFINERS ASSOCIATION

607 RING BUILDING • WASHINGTON, D.C. 20036 • (202) 331-7081

July 15, 1980

APRA TAX PROPOSALS

The American Petroleum Refiners Association represents 64 small and independent refiners. In addition, it has 21 associate members. Also, APRA is the largest trade association representing small, independent domestic refiners.

APRA recently caused a study to be made of the existing tax provisions applicable to small refiners and possible changes in those provisions that might help the small refining industry survive the current turmoil caused by abrupt decontrol of domestic oil prices, the phase out of entitlements, increasing crude oil costs, changes in the existing mix of available crude (from sweet, light crude to more and more sour crude), and the lack of access by small refiners to remaining sweet crude supplies.

As a result of that study and preliminary discussions with others in the industry and persons in Government--both on and off Capitol Hill, APRA has developed a number of tax proposals to provide, during a transition period, a measure of relief to this industry. This work was done with the help of APRA's special tax counsel, Charles M. Bruce of Cole Corette & Bradfield. We have also developed the necessary background information and revenue estimates (with the help of an independent consultant, William K. Hunter, and the accounting firm of Ernst & Whinney) that will be necessary for these proposals to be fairly assessed.

These proposals can be viewed as a package or separately.

Underlying these proposals is the recognition that the small refining industry cannot in the future rely upon government assistance, but must stand on its own. At the same time, the industry is faced with the necessity of financing the conversion of its facilities from refineries processing principally sweet crude oil to more economical, more energy efficient refineries capable of running more readily available crude types.

APRA's tax proposals are intended to help this industry through this transition period and to enable it to stand "on its own two feet."

There are going to be business failures in the small refining industry as a result of the severe changes and new conditions. Without some Government recognition of the need to carefully traverse this transition period, this vital segment of the refining industry may simply disappear--leaving only the major oil companies to meet the nation's needs as they wish. Furthermore, the independent segment throughout the U.S. energy distribution chain (including jobbers, marketers, and service station owners) will be in grave peril as well.

Most objective observers feel that the small refining industry plays a unique and necessary role, for instance, in its production of special products, its servicing of relatively isolated markets, and its development of new, innovative processes, products, and marketing techniques.

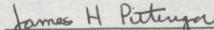
These proposals, it is hoped, will enable the industry to continue to help fulfill this country's energy needs.


 Laurence R. Steenberg
 Chairman, American Petroleum
 Refiners Association
 President, Laketon Asphalt
 Refining, Inc.
 Evansville, Indiana

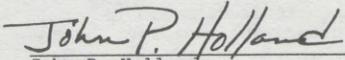

 Terry P. Gallagher
 President, American Petroleum
 Refiners Association
 President, Asamera Oil (U.S.) Inc.
 Denver, Colorado



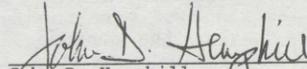
Richard A. Deal
Executive Vice President,
American Petroleum Refiners
Association
President, Independent
Refining, Inc.
Houston, Texas



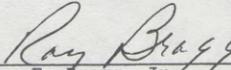
James H. Pittinger
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President, Oklahoma Refining Co.
Oklahoma City, Oklahoma



John P. Holland
Executive Committee
American Petroleum Refiners
Association
Chairman, Bruin Corp.
Houston, Texas



John D. Hemphill
American Petroleum Refiners
Association
Executive Committee
Vice President, E-Z Serve, Inc.
Abilene, Texas



Ray F. Bragg, Jr.
Executive Director
American Petroleum Refiners
Association

S - U - M - M - A - R - Y

PROPOSALS FOR SMALL AND INDEPENDENT REFINERS

Small and independent refiners in this country face fierce competitive pressures from the major, integrated oil companies, on the one side, and erratic marketplace and regulatory forces on the other.

They and the country together face the need to produce a wider range of more sophisticated petroleum products at a lower cost to the consumer, to adjust to a more sour crude oil supply, and to continue to serve the many diverse--sometimes isolated--domestic markets.

In order to create a stable economic climate, in which refiners that are willing to adapt to the needs of the country can survive, the American Petroleum Refiners Association ("APRA") and its member companies are proposing that new tax and other legislative and administrative measures be adopted.

The proposals can be viewed as a package or separately.

A number of the proposed provisions would be temporary. They would apply only during a transition period lasting a few years (remembering, however, that delays in obtaining permits can postpone refinery construction for 5 years or more).

Given these measures, the small and independent refiners will be able to produce the petroleum products that this society needs and do so in competition with some of the world's largest corporations.

APRA and its members propose, for small and independent refiners:

- INCENTIVES TO "FREE-UP" CRUDE OIL SUPPLIES for small and independent refiners;
- AN ADDITIONAL 10 PERCENT INVESTMENT TAX CREDIT for certain investments in new refining equipment that expands and modernizes existing refinery facilities so as, for example, to permit the processing of more sour crude and to conserve energy;
- BROADENED ASSET DEPRECIATION RANGE (ADR) for this same type of investment to permit a lower range life of 7 years;

- allowance of an IMMEDIATE WRITE-OFF, OR EXPENSING, OF POLLUTION CONTROL EQUIPMENT;
- RAPID WRITE-OFF OF CERTAIN OBSOLETE EQUIPMENT;
- NONRECOGNITION TREATMENT (tax to be deferred rather than paid currently) on sale of assets and reinvestment, plus RELAXATION OF EXISTING RESTRICTIONS ON CARRYOVERS OF NET OPERATING LOSSES; and
- CREATION OF SPECIAL FOREIGN TRADE ZONES for certain refineries, where their operations would be wholly or partially exempt from certain Federal, State and local taxes, duties and fees and from which the reexport of refined foreign crude oil would be simplified.

APRA and its members, together with other organizations and groups, will work with the Legislative and Executive Branches towards enactment of these proposals.

Also, the Administration is presently formulating its capital formation proposals. These proposals should take into account the situation facing domestic small and independent refiners.

REVENUE EFFECTS

The revenue effects of the APRA proposals have been estimated to the extent possible at this time. This work was performed by the accounting firm of Ernst & Whinney, based upon information provided by APRA, its independent consultant, William K. Hunter and its tax counsel, Charles M. Bruce of Cole Corette & Bradfield.

Revenue estimates for three of the proposals (additional 10% investment tax credit, broadened asset depreciation range, and immediate write-offs for pollution control equipment) have been made. One of the proposals (incentives to "free-up" crude oil supplies) is not susceptible of accurate revenue estimates at this time, due to the difficulty of estimating the response to such a proposal and the size of the deduction that would be necessary to create an effective incentive. The revenue effect of another proposal (relaxation of existing restrictions on carryovers of net operating losses) could not be accurately determined because the NOLs of small refiners cannot be accurately estimated and, furthermore, no reasonable estimate can be made of the extent to which such NOLs ultimately would be utilized. In any event, it is likely that this proposal would have a negligible revenue effect. One proposal (rapid write-off of certain obsolete equipment) is thought to be largely a clarification of existing practice.

Two remaining proposals (changes in the non-recognition rules and creation of special foreign trade zones) are estimated to have only slight revenue effects. For the three proposals for which revenue effects are available, the maximum aggregate revenue loss for fiscal year 1980, assuming an effective date for these proposals of January 1, 1980, would be \$42.4 million; for fiscal year 1981, \$164.5 million; and for fiscal year 1982, \$236.9 million.

The revenue effects of the proposals can be summarized as follows:

-- Aggregate Revenue Effects. Taking into consideration the three proposals for which revenue estimates are available, the maximum aggregate revenue effects for each year in a 10-year period beginning with 1980 are as follows:

	<u>Calendar Year</u> (in millions)	<u>Fiscal Year</u> (in millions)
1980	(\$ 56.6)	(\$ 42.4)
1981	(\$ 195.7)	(\$ 164.5)
1982	(\$ 240.2)	(\$ 236.9)
1983	(\$ 226.9)	(\$ 231.1)
1984	(\$ 230.8)	(\$ 228.7)
1985	(\$ 204.3)	(\$ 211.5)
1986	(\$ 122.9)	(\$ 141.5)
1987	(\$ 46.5)	(\$ 61.0)
1988	\$ 19.0	\$ 6.3
1989	\$ 68.1	\$ 59.1

-- Revenue Effects for Four Hypothetical Refiners. Revenue estimates were made for four hypothetical refiners. These estimates show the magnitude of the tax benefits being proposed in comparison with the expenditures that will have to be made by small refiners.

A small, sweet crude refiner that finds itself faced with the necessity of processing sour crude--or going out of business, will need to spend as much as \$140,000,000 in order to upgrade its facilities. This expenditure will allow it to operate at a capacity of 30,000 bpd. In the likely event that it decides at the same time to expand its capacity, the required expenditure may be twice that amount.

For purposes of illustration, four hypotheticals were developed: Refiner A has a Category I refinery and expends \$28,100,000 to expand its facility and move into Category II. (This development is unlikely to occur since Refiner A would simply be increasing its capacity and therefore compounding its marketing problems; it would not be growing in sophistication of processing or improving the marketability of its product slate.) Refiner B has a Category I refinery and expends \$77,500,000 to move into Category III. Refiner C has a Category I refinery and expends \$127,900,000 to move into Category IV. Refiner D has a Category I refinery and expends \$139,100,000 to move into Category V.

For purposes of these estimates, the small refining industry is divided into the following five categories:

<u>Category</u>	<u>Operation Type</u>	<u>Crude Oil Capacity</u>	<u>Crude Oil Type</u>
I	Topping	8,500 BPD	Lt. Crude with 0.5% S
II	Topping	30,000 BPD	Lt. Crude with 0.5% S
III	Hydroskimming	30,000 BPD	Lt. Crude with 0.7% S
IV	Catalytic Cracking	30,000 BPD	Lt. Crude with 2.0% S
V	Hydrocracking	30,000 BPD	Lt. Crude with 2.0% S

The total and individual year revenue effects for each hypothetical refiner are as follows (in thousands of dollars):

<u>Refiner A</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
	(23.5)	(237.2)	(517.6)	(1,194.0)	(1,891.2)
	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>
	(1,645.6)	(1,061.3)	(659.8)	(310.7)	38.4
<u>Refiner B</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
	(65.0)	(654.3)	(1,448.5)	(3,409.1)	(5,398.0)
	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>
	(4,675.4)	(3,009.4)	(1,869.7)	(879.2)	113.9

<u>REFINER D</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
	(116.8)	(1,174.3)	(2,639.8)	(6,345.3)	(10,057.5)
	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>
	(8,687.8)	(5,591.5)	(3,477.4)	(1,639.4)	203.5

A FEW WORDS ABOUT ASPHALT REFINERS

Special attention should be given to another class of small refiners, small asphalt refiners.

Small asphalt refiners typically have designed their facilities and made substantial capital expenditures so as to be able to first process low-gravity sour crude oils and then store (in many cases at high temperatures) the finished petroleum products. These refiners have normally been in existence for many years. They were not spawned by recent government regulations and product shortages. These refiners have the ability to refine sour crude into finished petroleum products ready for sale to the ultimate consumer without requiring further processing by another refinery, large or small. Many of these refiners produce sizeable quantities of specialty products and are substantial marketers in their geographic area. Many of these small refiners are today, and have been, suppliers of sizeable quantities of various petroleum products to the United States Armed Forces. They are also substantial suppliers of roofing and paving grades of asphalt for the home and commercial building and highway construction industries.

One of the primary concerns of this segment of the small refining industry is equal access to suitable types of crude oil at competitive prices. As more of the major oil companies, with their vast financial resources, begin processing these sour crude oils, it is possible, perhaps even probable, that the major oil companies will discontinue making this quality of crude oil available to this category of small refiners. In most cases the major oil companies will convert "the bottom of their barrel" to coke. Not only will the historic small refiner of sour crude be adversely impacted, but many of his customers, including the military and highway construction industries, will find that their source of petroleum products is disappearing. If replacement suppliers can be located, they will normally be at more distant locations, requiring higher transportation costs.

At a minimum the major oil companies should be encouraged--by the enactment of the aforementioned incentives to "free-up" crude oil supplies--to continue to make this type of crude oil available to this category of small refiners at competitive prices.

July 15, 1980

BACKGROUND MEMORANDUM
PROPOSALS FOR SMALL AND INDEPENDENT REFINERS
AMERICAN PETROLEUM REFINERS ASSOCIATION

This memorandum discusses tax and other measures proposed by the American Petroleum Refiners Association and its members on behalf of domestic small and independent refiners.

Small refiners range up to 50,000 bpd in capacity. Independent refiners are generally those refiners that have less than 30% of their own crude oil supplies and must rely on others for the remainder. As a group, these refiners are generally referred to as "small refiners".

The proposals can be viewed as a package or separately. A number of the proposals might be applied only during a transition period lasting a few years. It should be pointed out, however, that due to delays in obtaining permits, construction and expansion of refining facilities can be delayed for 5 years or more.

These proposals are intended to allow small and independent refiners to effectively compete with the major oil companies in meeting the needs of consumers for a growing list of sophisticated petroleum products. At the same time, they encourage

- getting the most out of each barrel of crude oil;
- utilizing the refining capacity and talents of this country in the most economical fashion;
- the establishment of a logical and workable national refining policy.

INCENTIVES TO "FREE-UP" CRUDE OIL SUPPLIES

There are precedents for using tax incentives to promote certain types of behavior. For example, included in the Energy Tax Act of 1978 were incentives for conversion to coal-fired boilers. Also, there is precedent for applying incentives in order to compel or coax one taxpayer to make something available to another taxpayer. For example, Section 1071 of the Code ("Gain From Sale or Exchange to Effectuate Policies of F.C.C.") provides for the nonrecognition of gain or loss when a station owner is forced to sell his property pursuant to an F.C.C. policy.

Major, integrated oil companies should be encouraged to make appropriate quality crude oil supplies available to small and independent refiners by the application of tax provisions. This goal can be achieved, for example, by allowing tax deductions for companies that have these supplies but that opt to process sour, heavier crudes instead. The amount of the deduction might be set at a level sufficient to offset approximately the cost differential between sweet and sour crudes, the operating cost differential between processing sweet and sour crudes (such as additional costs for hydrogen, chemicals, fuel, etc; but not capital costs for equipment), and the estimated "market penalty" for producing a product slate from sour crude supplies.

Adequate domestic supplies of crude appropriate for processing by small refiners presently exist. These supplies should be made available to small refiners during a transition period (during which these refiners will convert and retrofit). Certainly, small refiners should not be subjected to the deliberate withdrawal of these supplies from the marketplace by the majors.

In addition, the major oil companies should be similarly encouraged to make sour "heavy" or asphaltic crude oils available to small refiners that produce asphalt, at prices that reflect the quality of the crude. Asphalt producers are especially hard pressed for this type of crude oil. Typically, they are tied to a narrow geographic area due to the problems of delivering their product at extremely high temperatures (300-400 degrees Fahrenheit).

INCENTIVES FOR CONVERSION AND RECONFIGURATION

Tax incentives should be provided for certain types of qualified expenditures. Qualified expenditures should include:

- Expenditures for equipment added to or replacing an existing petroleum refining facility. The purpose of this provision is to encourage increased efficiency, reduce operating costs, and improve safety of operations. The provision is also intended to encourage small refiners to attain economies of scale.
- Expenditures for equipment for converting or modifying existing petroleum refining facilities

--Expenditures for certain specified equipment that is added to an existing petroleum refining facility. This equipment should be listed in the statute. Examples might include a catalytic cracking unit, a reformer, and a hydrocracking unit. The purpose of this provision is to promote the production of certain products, such as, unleaded gasoline and petroleum feedstocks, by small and independent refiners.

--Expenditures for equipment for conserving energy where these expenditures do not presently qualify under the Energy Tax Act of 1978.

The incentives would be in the form of an additional 10% investment tax credit (on top of the existing 10% investment tax credit and 1 1/2% TRASOP credit) and a broadened Asset Depreciation Range (ADR) to permit a lower range life of 7 years.

The additional investment tax credit should be made refundable if and when the existing 10% investment tax is made refundable.

Analogues for each of these forms of incentives currently exist in the tax law. For example, in the Energy Tax Act of 1978 (P.L. 95-618), Congress provided an additional 10% investment tax credit for the following types of energy property: alternative energy property, so-called specially defined energy property, solar or wind energy property, recycling equipment, shale oil equipment, and equipment for producing natural gas from geopressurized brine. Section 48(1), Internal Revenue Code of 1954. Other examples are the 5-year amortization rule for certain pollution control facilities (section 169) and the additional limited first-year depreciation allowance for small businesses (section 179). Additional examples were added by the recently enacted Crude Oil Windfall Profits Tax Act of 1980.

RAPID AMORTIZATION OF POLLUTION CONTROL FACILITIES

Under existing law, a taxpayer may elect to write-off over a five-year (60-month) period the cost of certain certified pollution control equipment. Section 169, Internal Revenue Code. This provision came into the law as part of the 1969 Tax Reform Act and was made permanent by the Tax Reform Act of 1976. The 1976 Act also extended the

provision to cover equipment placed in service after 1975 if installed in plants that were in operation before 1976. In order to qualify, the facility must be used in connection with a plant or other property in operation before 1976.

Petroleum refiners should be allowed to expense Government mandated equipment (that is, to write it off in one year). Proposals along these lines for all industries were proposed, and have received considerable support, in the Ninety-Fourth, Ninety-Fifth and Ninety-Sixth Congresses.

TAX WRITE-OFFS FOR OBSOLETE EQUIPMENT

At present, obsolescence is a factor in computing depreciation. Thus, if a piece of equipment were suddenly to become obsolete, depreciation on the remaining depreciable basis should be accelerated or that basis should simply be written-off. In the Revenue Act of 1978, special treatment was provided for depreciation of a gas or oil-fired boiler which is retired or replaced before the end of the originally determined useful life.

A provision should be instituted to clearly designate certain outmoded refining equipment as obsolete and subject to an immediate write-off. Much of this equipment can properly be written off under current rules; as to that type of equipment, this provision would merely codify existing practice. Included in the category of "obsolete" equipment should be equipment with high maintenance costs, a poor safety record, or high energy/cost inefficiencies. Refinery equipment that leaves a high percentage of "bottoms" should be viewed as obsolete in today's economy.

Moreover, the Treasury Department should issue rulings or regulations permitting a write-off for certain existing petroleum refining assets on the ground that these assets have been made obsolete by changes in the mix of available crude supplies and the prevailing regulatory scheme. This action can be taken apart from any legislative action.

NONRECOGNITION AND NOL PROVISIONS

In order to attract new equity investment in the small refining industry, several technical changes should be enacted with respect to small refiners.

- The sale should be treated as a nonrecognition transaction. The sellers should not be taxed on any gain so long as it is reinvested in another small business within an 18-month period. Proposals along these lines have been put forth on several occasions in the past. There are a number of nonrecognition provisions in the tax law today.
- Existing restrictions on carryovers of net operating losses (NOLs) should be relaxed, so that an acquiring corporation can take advantage of the losses generated prior to sale.

FOREIGN TRADE ZONES FOR REFINING ACTIVITIES

There presently exists the concept of foreign trade zones. These are areas established under Federal statutes where goods can enter the country and be worked on -- bulk packages can be broken down and inspected, goods can be assembled, some manufacturing using imported raw materials can even take place -- without being subject to customs entry, payment of duty, certain Federal taxes, some personal property taxes, or bond. Some States and localities do not apply their property tax to these foreign trade zones either by statute or on the ground that Federal law preempts them from doing so.

Federal statutes should encourage small and independent refiners to establish and operate refining facilities in foreign trade zones.*/ Also, refineries so located, whether they act only as refiners or also as importers of foreign crude, should incur import fees only on quantities of product shipped out of the zone. Also refiners located in these zones should be permitted to freely reexport products refined from foreign crude oil pursuant to toll refining agreements, under a general license for reexport. Under a toll refining agreement, a domestic refiner acquires foreign crude oil supplies for a stated per barrel price plus the commitment to refine and reexport a certain amount of foreign crude oil.

*/ At least two small refineries at present operate in foreign trade zones. Any site within the United States, upon application and authorization, can be designated a foreign trade zone. A plant or a warehouse or a refinery need not be moved or relocated.

Ernst & Whinney

1225 Connecticut Avenue, N.W.
Washington, D.C. 20036

July 15, 1980

202/862-6000

Mr. Ray F. Bragg, Jr.
Executive Director
American Petroleum Refiners Association
Washington, D.C. 20036

Dear Mr. Bragg:

At your request we have prepared a report on the revenue effect of seven legislative proposals designed to help small refiners compete effectively after the entitlements program is phased out. The legislative proposals considered were:

- An Additional 10 Percent Investment Tax Credit.
- Broadened Asset Depreciation Range.
- Immediate Write-Off of Pollution Control Equipment.
- Incentives to "Free-Up" Crude Oil Supplies.
- Rapid Write-Off of Certain Obsolete Equipment.
- Rollover Treatment on Sale of Assets Plus Relaxation of Existing Restrictions on NOL Carryovers.
- Creation of Special Foreign Trade Zones.

In addition to our principal conclusions regarding the estimated revenue effects of your proposals, we also have set forth our analysis and estimated revenue effects in respect of four hypothetical cases developed by APRA. They illustrate the revenue effect of upgrading and expanding certain small "profile" refining operations. In all cases the projected effects on revenues are based on the information supplied by you and Mr. William K. Hunter.

We appreciate the cooperation and information provided by you and Mr. Hunter. If you have any questions concerning any aspect of our report, we would be pleased to respond to your inquiry.

Very truly yours,

Ernst & Whinney

AMERICAN PETROLEUM REFINERS ASSOCIATION
REVENUE EFFECT OF LEGISLATIVE PROPOSALS

In General

Pursuant to the request of the American Petroleum Refiners Association (APRA), the attached estimates have been prepared setting forth the approximate revenue loss to the U.S. Treasury of certain legislative proposals recommended by APRA and its membership. These revenue estimates are based upon assumptions and other information supplied by Mr. William K. Hunter, special consultant to APRA, and Mr. Ray F. Bragg, Jr., Executive Director of APRA. (The estimates do not take into account any possible "feedback" effect.)

The legislative proposals submitted by APRA are as follows:

- AN ADDITIONAL 10 PERCENT INVESTMENT TAX CREDIT for certain investments in new refining equipment that expands and modernizes existing refinery facilities;
- BROADENED ASSET DEPRECIATION RANGE (ADR) for this same type of investment to permit a lower range life of 7 years;
- IMMEDIATE WRITE-OFF, OR EXPENSING, OF POLLUTION CONTROL EQUIPMENT;
- INCENTIVES TO "FREE-UP" CRUDE OIL SUPPLIES for small and independent refiners;
- RAPID WRITE-OFF OF CERTAIN OBSOLETE EQUIPMENT;
- NONRECOGNITION TREATMENT (tax to be deferred rather than paid currently) on sale of assets and reinvestment plus RELAXATION OF EXISTING RESTRICTIONS ON CARRYOVERS OF NET OPERATING LOSSES (NOLs); and
- CREATION OF SPECIAL FOREIGN TRADE ZONES.

Based on the information supplied by APRA, the estimated revenue effect for the period January 1, 1980 through December 31, 1989 of the first

three proposals -- Additional ITC, Broadened Depreciation Range, and Immediate Write-Off of Pollution Control Equipment -- would be \$1,236.8 million on a calendar year basis. The estimated revenue effect for each of these years, assuming enactment of all three proposals, is as follows:

	<u>Calendar Year</u> (in millions)	<u>Fiscal Year</u> (in millions)
1980	(\$ 56.6)	(\$ 42.4)
1981	(\$ 195.7)	(\$ 164.5)
1982	(\$ 240.2)	(\$ 236.9)
1983	(\$ 226.9)	(\$ 231.1)
1984	(\$ 230.8)	(\$ 228.7)
1985	(\$ 204.3)	(\$ 211.5)
1986	(\$ 122.9)	(\$ 141.5)
1987	(\$ 46.5)	(\$ 61.0)
1988	\$ 19.0	\$ 6.3
1989	<u>\$ 68.1</u>	<u>\$ 59.1</u>
	<u>(\$1,236.8)</u>	<u>(\$1,252.2)</u>

For the remaining proposals it was determined that the revenue effect of the proposals to free-up crude oil supplies, to create foreign trade zones and to relax existing NOL carryover restrictions was not susceptible to estimation. With regard to the incentive proposal, no reasonable estimate can be made at this time of the response of companies holding sweet crude supplies to such a proposal or the amount of the deduction or credit that would be necessary to effect a crude oil cost equalization between sweet and sour crude oil stocks. Likewise, it was not possible to estimate the revenue effect of the proposal to create foreign trade zones. The revenue effect of the NOL proposal could not be determined, because the NOLs of small refiners cannot be estimated and, furthermore, no reasonable estimate can be made of the extent to which such NOLs ultimately will be utilized.

The proposal to defer the recognition of gain on the sale of assets by the small refiners was estimated to have a negligible revenue effect since we understand, and have been advised, that most small refiners would not realize any significant gain on the sale of their equipment due to the high cost of removing it. The proposal for a rapid write-off of certain obsolete equipment was determined to have a negligible effect.

Assumptions and Methodology

In order to compute the revenue effect of the proposals for Additional ITC, Immediate Write-Off of Pollution Control Equipment, and Broadened Depreciation Range, APRA provided the following:

- A list of small refiners and the estimated expenditures to be made by each of them.

- A percentage breakdown of the total expenditures that would be spent on plant equipment, pollution control equipment, and building and site preparation. These percentages varied depending on the magnitude of the project to be undertaken.

The list of small refiners consisted of two parts. First, it listed those refiners that presently are constructing new facilities or are committed to begin such construction (approximately 44 companies), estimated the amount of the expenditures to be made, and specified the year the equipment would be placed in service.

The estimate of the capital equipment placed in service by year for these 44 companies is as follows (in millions):

	<u>1980</u>	<u>1981</u>	<u>1982</u>
Plant Equipment	\$616.9	\$1,383.6	\$246.1
Pollution Equipment	34.4	77.5	13.8
Building and Site Preparation	<u>10.7</u>	<u>29.0</u>	<u>5.1</u>
	<u>\$662.0</u>	<u>\$1,490.1</u>	<u>\$265.0</u>

Second, it indicated which of the 162 existing small refiners likely would make additional expenditures to expand and modernize their refineries if adequate incentives were offered. Of this group, it was estimated that 76 companies would be unable to take advantage of the proposed legislation because of economic circumstances, or the lack of an adequate crude oil supply. The remaining 86 companies were segregated into general expenditure categories of \$20 million (69), \$100 million (10), and \$200 million (7), based on 1979 price levels. In our analysis we have assumed that the companies projected to spend \$20 million began planning for their expansion on July 1, 1980, and will complete construction by July 1, 1983. For those companies projected to spend \$100 million or \$200 million, we have assumed that planning began on July 1, 1980, and construction would be completed on July 1, 1984.

As noted, APRA also provided an estimate of the breakdown of total expenditures between plant equipment, pollution control equipment, and building and site preparation. These percentage breakdowns are as follows:

<u>Total Expenditure</u> (in millions)	<u>% Plant Equipment</u>	<u>% Pollution Equipment</u>	<u>% Building & Site</u>
\$ 20	94.8	5.2	0
\$100	91.8	5.2	3
\$200	92.3	5.2	2.5

In addition, APRA provided an estimate of the flow of expenditures that the refiners would incur. For those small refiners with expansion projects scheduled for completion in 1980-1982, it was assumed that no revenue effect resulted until the project was completed. For those companies with estimated expenditures of \$20 million, the flow of expenditures was assumed to be 18%, 62%, and 20% for the subsequent 12 month periods beginning July 1, 1980 and ending July 1, 1983, e.g., 18% of the total expenditure contemplated would be incurred in the period beginning July 1, 1980, and ending July 1, 1981.

For the categories of companies spending \$100 million or \$200 million, it was assumed that the expenditures would be incurred at the rate of 2%, 16%, 62%, and 20% for each of the twelve-month periods beginning July 1, 1980, and ending July 1, 1984, e.g., for the period beginning July 1, 1982, and ending July 1, 1983, 62% of the total expenditures would be incurred by the refiner. In addition it was assumed for this group that no expenditure for building and site preparation would be made until the 25th month.

Based upon the above information, we computed the revenue effect on the U.S. Treasury for calendar years 1980 through 1989. See Exhibit I and the "Additional Assumptions" which follow:

EXHIBIT I

AMERICAN PETROLEUM REFINERS ASSOCIATION Revenue Estimate (In millions of dollars)										Total 1980-1989	
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	
Additional 10% Investment Tax Credit [1]	(43.6)	(142.8)	(164.5)	(135.5)	(75.4)	(36.3)	(20.1)	(10.1)	(3.1)	(.4)	(631.8)
Immediate Writeoff of Pollution Control Equipment [2]	(7.4)	(15.0)	4.4	(11.2)	(38.0)	6.7	17.3	15.0	13.1	11.5	(3.6)
Broadened Depreciation Range [3]	(13.0)	(52.9)	(75.7)	(91.4)	(155.4)	(168.0)	(102.8)	(36.4)	22.1	68.5	(605.0)
Additional 10% Investment Tax Credit	(43.6)	(142.8)	(164.5)	(135.5)	(75.4)	(36.3)	(20.1)	(10.1)	(3.1)	(.4)	(631.8)
Broadened Depreciation Range	(13.0)	(52.9)	(75.7)	(91.4)	(155.4)	(168.0)	(102.8)	(36.4)	22.1	68.5	(605.0)
TOTAL [1]	(56.6)	(195.7)	(240.2)	(226.9)	(230.8)	(204.3)	(122.9)	(46.5)	19.0	68.1	(1236.8)

[1] Proposal is not affected even if the immediate writeoff of pollution control equipment passes, as refiners will opt for the additional 10% ITC since it results in the greater financial benefit.

[2] Assumes that both the additional 10% ITC proposal and the broadened depreciation range proposal do not pass, since each of those proposals will result in a greater financial benefit to the refiner.

[3] Proposal is not affected even if the immediate writeoff of pollution control equipment passes, since under present law refiners will lose the current 10% ITC that they are entitled to for pollution control expenditures. Thus, the broadened depreciation range and the current 10% ITC results in a greater financial benefit than the immediate writeoff of pollution control equipment.

Additional Assumptions

Because total expenditures were based on 1979 price levels, it was necessary to adjust them for inflation occurring during the construction period. For this purpose, we assumed an annual inflation rate of 10% occurring evenly over the 3 to 4 year period of construction. (For those companies scheduled to complete projects in 1980, 1981, or 1982, no inflation rate was applied since the majority of the expenditures have been incurred or a binding contract in current dollars was assumed to exist.) During the various 12-month periods, the expenditures to be incurred were allocated to various components based upon the ratios of component expenditures to total expenditures to be incurred on the work-in-process during the respective 12-month period. For example, during the period July 1, 1980, to July 1, 1981, it was assumed that, for the 10 refiners in the spending category of \$100 million, a total of \$20 million (2%) would be incurred in this period and 94.64% ($91.8 \div 97$) would be attributable to plant equipment and 5.36% ($5.2 \div 97$) would be attributable to pollution control equipment. The expenditures for the final 12-month period were allocated to the components in the amount necessary to reflect the appropriate allocations supplied by APRA, i.e., for refiners expending \$100 million, the expenditures for the period beginning 37 months after the commencement of the project would be allocated to the various components to bring the expenditures for plant equipment, pollution control equipment, and building and site to 91.8%, 5.2% and 3.0%, respectively, of the total expenditures. After these

amounts were allocated, the assumed inflation rate adjustment was applied to the various component expenditures.

Once the total expenditure, after adjustment for inflation, was allocated by period for each of the various components, the amount of additional investment tax credit was computed on the progress expenditures as permitted under Section 46(d) of the Internal Revenue Code of 1954. It was assumed further that only 90% of the total allowable ITC would be utilized, with 75%, 10%, 5%, 5% and 5% of this amount being claimed in the 5 successive years beginning with the year the progress expenditure for the equipment was incurred. We believe this assumption is consistent with sound revenue estimating practices.

Depreciation was computed on the plant equipment and pollution control equipment using both a 13-year life, the lower limit under the Asset Depreciation Range (ADR) System for Petroleum Refining assets, and a 7-year life under the APRA proposal. For purposes of computing depreciation it was assumed that all assets were placed in service in the middle of the year. In addition, it was assumed that the refiners would maximize depreciation, i.e., adopt the double-declining balance method and switch to the sum-of-the-years-digit method when most advantageous. The tax effect of the difference in depreciation was computed using a 38% effective corporate tax rate which we believe should be representative of the small refiner's industry as a whole.

Finally, the revenue effect of the immediate write-off of pollution control equipment was computed. To compute this amount, the effect of deducting the cost of the pollution control equipment for the year such equipment was placed in service was compared to foregoing both the depreciation deduction based on a 13-year life and the current-law 10% investment tax credit. The difference between the immediate write-off deduction and depreciation was, once again, tax effected at 38%. (It should be noted that a sulfur plant was not treated, for purposes of this proposal, as an item of pollution control equipment.)

As part of the computation, the impact of the immediate write-off proposal was compared to the impact of the additional 10% ITC proposal and the broadened depreciation range proposal. Based on a 10% discount rate, we could not identify any instance where it would be more beneficial for a refiner to elect immediate write-off of the cost of pollution control equipment if either the additional ITC proposal or the broadened depreciation range proposal were enacted. In other words, if all three of APRA's legislative proposals were adopted, the small refiners would not elect the immediate write-off of pollution control equipment. Accordingly, the maximum loss to the U.S. Treasury of the APRA proposals is the sum of the revenue effect of the additional 10% ITC proposal and the revenue effect of the broadened asset depreciation range proposal -- a total of \$1236.8 million for the period 1980-1989.

Individual Case Studies

In addition to the revenue effect of the APRA legislative proposals on the U.S. Treasury, APRA requested that we compute the revenue effect of these proposals for certain small refiners for upgrading their present refinery capacity. In particular, APRA requested that the revenue effect be computed for a small refiner for upgrading its operations from a topping operation with 8,500 barrels per day (BPD) of capacity to the following:

1. A topping operation with 30,000 BPD capacity on low sulfur crude oil;
2. A hydroskimming operation with 30,000 BPD capacity on semi-sour crude oil;
3. A catalytic cracking type operation with 30,000 BPD capacity on sour crude oil; and
4. A hydrocracking type operation with 30,000 BPD capacity on sour crude oil.

For further details regarding these various cases refer to the discussion in the APPENDIX hereto which was prepared by Mr. Hunter.

Mr. Hunter supplied a breakdown of the potential cost to a small refiner for each type of expansion proposal allocated among the components of the proposed facility. In tabular form, the breakdown of the estimated costs is as follows (in thousands):

	Hypothetical <u>1</u>	Hypothetical <u>2</u>	Hypothetical <u>3</u>	Hypothetical <u>4</u>
Plant Equipment	\$22,810	\$65,050	\$106,630	\$116,090
Pollution Equipment	2,000	5,400	13,400	14,300
Building & Site Prepara- tion	<u>3,290</u>	<u>7,050</u>	<u>7,870</u>	<u>8,710</u>
TOTAL	<u>\$28,100</u>	<u>\$77,500</u>	<u>\$127,900</u>	<u>\$139,100</u>

In order to compute the revenue effect under each hypothetical case, it was necessary to modify certain of the underlying assumptions made with respect to the computation of the aggregate revenue effect. In particular, it was assumed that the marginal tax rate would be 46% and that the refiner would be able to utilize 100% of the ITC earned for the year, assuming that the payments were qualified progress expenditures under Section 46(d) of the Code. As a result of the different allocations in the APRA assumptions and our modified assumptions, the individual cases do not have a direct correlation to the aggregate revenue effect.

Based upon the information supplied, the maximum revenue loss per refiner for hypotheticals one through four would be as follows (in thousands of dollars):

Hypothetical One	- (\$ 7,502.5)
Hypothetical Two	- (\$21,294.7)
Hypothetical Three	- (\$32,882.9)
Hypothetical Four	- (\$39,526.3)

Detailed schedules by proposal for each hypothetical are attached as Exhibits II, III, IV, and V.

EXHIBIT II

AMERICAN PETROLEUM REFINERS ASSOCIATION Revenue Estimate Hypothetical Use (in thousands of dollars)											
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	Total 1980-1989
Additional 10% Investment Tax Credit [1]	(23.5)	(237.2)	(517.6)	(1,194.0)	(1,096.5)	(206.7)					(3,275.5)
Immediate Writeoff of Pollution Control Equipment [2]	1.8	19.1	41.7	96.3	(608.5)	(69.5)	155.7	140.9	127.9	114.7	(179.9)
Broadened Depreciation Range [3]					(794.7)	(1,438.9)	(1,061.3)	(659.8)	(310.7)	38.4	(4,227.0)
Additional 10% Investment Tax Credit	(23.5)	(237.2)	(517.6)	(1,194.0)	(1,096.5)	(206.7)					(3,275.5)
Broadened Depreciation Range					(794.7)	(1,438.9)	(1,061.3)	(659.8)	(310.7)	38.4	(4,227.0)
TOTAL [1]	(23.5)	(237.2)	(517.6)	(1,194.0)	(1,645.6)	(1,645.6)	(1,061.3)	(659.8)	(310.7)	38.4	(7,502.5)

[1] Proposal is not affected even if the immediate writeoff of pollution control equipment passes, as refiners will opt for the additional 10% ITC since it results in the greater financial benefit.

[2] Assumes that both the additional 10% ITC proposal and the broadened depreciation range proposal do not pass, and that of those proposals will result in a greater financial benefit to the refiner.

[3] Proposal is not affected even if the immediate writeoff of pollution control equipment passes, since under present law refiners will lose the current 10% ITC that they are entitled to for pollution control expenditures. Thus, the broadened depreciation range and the current 10% ITC results in a greater financial benefit than the immediate writeoff of pollution control equipment.

EXHIBIT III

AMERICAN PETROLEUM REFINERS ASSOCIATION Revenue Estimate Hypothetical Two (in thousands of dollars)											
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	Total 1980-1989
Additional 10% Investment Tax Credit [1]	<u>(65.0)</u>	<u>(654.3)</u>	<u>(1,448.5)</u>	<u>(3,409.1)</u>	<u>(3,142.6)</u>	<u>(592.7)</u>	---	---	---	---	<u>(9,312.2)</u>
Immediate Writeoff of Pollution Control Equipment [2]	<u>5.0</u>	<u>50.1</u>	<u>111.0</u>	<u>261.3</u>	<u>(2183.5)</u>	<u>(187.7)</u>	<u>420.9</u>	<u>381.0</u>	<u>345.4</u>	<u>310.0</u>	<u>(486.5)</u>
Broadened Depreciation Range [3]	---	---	---	---	<u>(2255.4)</u>	<u>(4082.7)</u>	<u>(3009.4)</u>	<u>(1869.7)</u>	<u>(879.2)</u>	<u>113.9</u>	<u>(11,982.3)</u>
Additional 10% Investment Tax Credit	<u>(65.0)</u>	<u>(654.3)</u>	<u>(1,448.5)</u>	<u>(3,409.1)</u>	<u>(3,142.6)</u>	<u>(592.7)</u>	---	---	---	---	<u>(9,312.2)</u>
Broadened Depreciation Range	---	---	---	---	<u>(2255.4)</u>	<u>(4082.7)</u>	<u>(3009.4)</u>	<u>(1869.7)</u>	<u>(879.2)</u>	<u>113.9</u>	<u>(11,982.3)</u>
TOTAL [1]	<u>(65.0)</u>	<u>(654.3)</u>	<u>(1,448.5)</u>	<u>(3,409.1)</u>	<u>(4675.4)</u>	<u>(3009.4)</u>	<u>(1869.7)</u>	<u>(1869.7)</u>	<u>(879.2)</u>	<u>113.9</u>	<u>(21,294.7)</u>
[1] Proposal is not affected even if the immediate writeoff of pollution control equipment passes, as refiners will opt for the additional 10% ITC since it results in the greater financial benefit.	[2] Assumes that both the additional 10% ITC proposal and the broadened depreciation range proposal do not pass, since each of those proposals will result in a greater financial benefit to the refiner.										
[1] Proposal is not affected even if the immediate writeoff of pollution control equipment passes, since under present law refiners will lose the current 10% ITC that they are entitled to for pollution control expenditures. Thus, the broadened depreciation range and the current 10% ITC results in a greater financial benefit than the immediate writeoff of pollution control equipment.	[3] Proposal is not affected even if the immediate writeoff of pollution control equipment passes, since under present law refiners will lose the current 10% ITC that they are entitled to for pollution control expenditures. Thus, the broadened depreciation range and the current 10% ITC results in a greater financial benefit than the immediate writeoff of pollution control equipment.										

EXHIBIT IV

AMERICAN PETROLEUM REFINERS ASSOCIATION Revenue Estimate Hypothetical Three (In Thousands of dollars)											
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	Total 1980-1989
Additional 10% Investment Tax Credit [1]	(107.4)	(1079.8)	(2428.7)	(5842.2)	(5406.2)	(1020.2)	-----	-----	-----	-----	(15,884.5)
Immediate Writeoff of Pollution Control Equipment [2]	12.0	120.5	271.1	652.2	(5420.4)	(4652.6)	1045.7	946.7	858.2	770.1	(1,209.5)
Broadened Depreciation Range [3]	-----	-----	-----	-----	(3201.3)	(3791.2)	(4269.7)	(2655.3)	(1249.6)	168.7	(16,998.4)
Additional 10% Investment Tax Credit	(107.4)	(1079.8)	(2428.7)	(5842.2)	(5406.2)	(1020.2)	-----	-----	-----	-----	(15,884.5)
Broadened Depreciation Range	-----	-----	-----	-----	(3201.3)	(3791.2)	(4269.7)	(2655.3)	(1249.6)	168.7	(16,998.4)
TOTAL [1]	(107.4)	(1079.8)	(2428.7)	(5842.2)	(8607.5)	(6811.4)	(4269.7)	(2655.3)	(1249.6)	168.7	(32,882.9)

[1] Proposal is not affected even if the immediate writeoff of pollution control equipment passes, as refiners still opt for the additional 10% ITC since it results in the greater financial benefit.

[2] Assumes that both the additional 10% ITC proposal and the broadened depreciation range proposal do not pass since each of those proposals will result in a greater financial benefit to the refiner.

[3] Proposal is not affected even if the immediate writeoff of pollution control equipment passes, since under present law refiners will lose the current 10% ITC that they are entitled to for pollution control expenditures. Thus, the broadened depreciation range and the current 10% ITC results in a greater financial benefit than the immediate writeoff of pollution control equipment.

EXHIBIT V

AMERICAN PETROLEUM REFINERS ASSOCIATION Revenue Estimate Hypothetical Four (in thousands of dollars)										Total 1980-1989	
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	
Additional 10% Investment Tax Credit [1]	(116.8)	(1174.3)	(2639.8)	(6345.3)	(5870.8)	(1107.9)	-----	-----	-----	-----	(17,254.9)
Immediate Writeoff of Pollution Control Equipment [2]	12.8	128.8	289.5	695.9	(5784.3)	(496.9)	1115.9	1010.3	915.8	821.8	(1,290.4)
Broadened Depreciation Range [3]	-----	-----	-----	-----	(4186.7)	(7579.9)	(5591.5)	(3477.4)	(1639.4)	203.5	(22,271.4)
Additional 10% Investment Tax Credit	(116.8)	(1174.3)	(2639.8)	(6345.3)	(5870.8)	(1107.9)	-----	-----	-----	-----	(17,254.9)
Broadened Depreciation Range	-----	-----	-----	-----	(4186.7)	(7579.9)	(5591.5)	(3477.4)	(1639.4)	203.5	(22,271.4)
TOTAL [1]	(116.8)	(1174.3)	(2639.8)	(6345.3)	(10057.5)	(8687.8)	(5591.5)	(3477.4)	(1639.4)	203.5	(39,526.3)

[1] Proposal is not affected even if the immediate writeoff of pollution control equipment passes, as refiners will opt for the additional 10% ITC since it results in the greater financial benefit.

[2] Assumes that both the additional 10% ITC proposal and the broadened depreciation range proposal do not pass, since each of those proposals will result in a greater financial benefit to the refiner.

[3] Proposal is not affected even if the immediate writeoff of pollution control equipment passes, since under present law refiners will lose the current 10% ITC that they are entitled to for pollution control expenditures. Thus, the broadened depreciation range and the current 10% ITC results in a greater financial benefit than the immediate writeoff of pollution control equipment.

UPGRADING OF SMALL REFINERIES

William K. Hunter

Mr. Hunter has been associated with the petroleum refining industry for over 33 years. He has performed services directly in more than 107 refineries and has been involved with or in charge of activities with many others. He was associated in various capacities for 23 years with UOP, Inc., a prominent developer and licensor of petroleum processes. He subsequently founded Air Resources, Inc., an energy and environmental conservation firm serving the petroleum and chemical industries. Since January of 1979, Mr. Hunter has served as an independent consultant to the petroleum industry. Mr. Hunter is a graduate of the Colorado School of Mines and holds a degree in petroleum engineering.

INTRODUCTION

Presented herein is an abbreviated analysis of the complexity and cost factors which would be involved in the upgrading of a small, low capacity refinery of the topping variety which currently operates on low sulfur crude (0.5 wt. % sulfur or less).

Small refiners can conduct marginal operations at small capacity on low sulfur content crude oil. Their operations, however, are limited in capacity primarily because of the marginal nature of the products produced and their ability to market those products. An increase in the sulfur content of crude oil supplies available to these refiners forces them to consider upgrading both the capacity and the complexity of their facilities.

As a basis for providing a meaningful comparison of different approaches to upgrading, with a minimum of technical language, the following cases can be compared:

<u>Category No.</u>	<u>Operation Type</u>	<u>Crude Oil Capacity</u>	<u>Crude Oil Type</u>
I	Topping	8,500 BPD	Lt. Crude with 0.5% S
II	Topping	30,000 BPD	Lt. Crude with 0.5% S
III	Hydroskimming	30,000 BPD	Lt. Crude with 0.5% S
IV	Catalytic Cracking	30,000 BPD	Lt. Crude with 2.0% S
V	Hydrocracking	30,000 BPD	Lt. Crude with 2.0% S

It should be noted that the maximum capacity contemplated for purposes of this comparison is 30,000 bpd. It might be argued that economies of scale are achieved at a higher capacity level (perhaps approximately 50,000 bpd).

The operations of refineries in Categories I and II are based on the processing of light sweet crude oil where the sulfur content is in the range of 0.5 weight per cent. Refineries in Category III operate on light semi-sour crude oil where the sulfur content is in the range of 0.7 weight per cent. Finally, refineries in Categories IV and V operate are on light sour crude oil with sulfur content in the range of 2.0 weight per cent. In order to simplify comparison, bases have been selected which are well recognized in the industry and have been utilized in a number of studies and articles presented to define the small refiners' situation under current and future market conditions.*/

The primary bases for cost estimation are the Nelson Indices and Complexity Factors.

DESCRIPTION OF REFINERY PROCESSES

Category I represents a topping operation at 8,500 bpd capacity on low sulfur (0.5%) crude. This category represents a petroleum refinery in its simplest form. Such a refinery is dependent on the availability of low sulfur crude oil in order to produce salable products and is restricted in its marketing capabilities. The refinery can produce salable distillate and residual fuel only to the extent that the sulfur content of these products falls in marketable ranges. The refinery can also produce jet fuel such as Type JP-4 and/or sell its naphtha to other refiners for upgrading or blending. A typical flow scheme for a Topping Refinery is shown in ATTACHMENT 1.

*/ See, for example, Nelson, W. L., "The Concept of Refinery Complexity", The Oil and Gas J. (September 13, 1979); Nelson, W. L., "Cost Indexes", The Oil and Gas J. (May 5, 1980); Bonner & Moore Associates, Inc., "Analysis of Recent Financial and Operating Data for Segments of the U.S. Domestic Petroleum Industry" (Mar. 31, 1978) (unpublished report by industry consultants); National Petroleum Council, "Refinery Flexibility - An Interim Report" (Dec., 1979); Purvin & Gertz, Inc., "An Analysis of Potential for Upgrading Domestic Refining Capacity" (Mar., 1980) (unpublished report for the American Gas Association by industry consultants); Office of Regulations & Emergency Planning, Economic Regulatory Administration of the U.S. Department of Energy, "Incentives for Small Refiners to Utilize Sour Crude and/or Produce Higher Octane Clear Pool Gasoline" (unpublished paper at DOE Public Affairs Office); and Office of Regulations, Economic Regulation Administration of the U.S. Department of Energy, "Small Refiner Bias Analysis" (Jan., 1978) (unpublished paper at DOE Public Affairs Office).

Category II represents a larger-size version of Case I (30,000 bpd capacity). This case is considered for comparison purposes only. The high volume of marginal products produced by it would simply create a greater marketing problem for the small refiner.

Category III represents a hydroskimming operation of 30,000 bpd capacity on semi-sour (0.7%S) crude oil. This is the type of operation that might be seriously considered by a Category I small refiner faced with increased crude oil sulfur levels. Such a refiner would consider adding Catalytic Reforming to upgrade his naphtha to motor fuel and also distillate desulfurization to reduce sulfur content in his distillate fuels. Some lower sulfur content distillate product might be blended with residual fuel to reduce its sulfur content and improve its marketability. A typical flow scheme is shown in ATTACHMENT 2.

Category IV represents a catalytic cracking type operation with a 30,000 bpd capacity, on sour (2.0%S) crude oil. This type of operation would be considered by a Category I refiner faced with a conversion to sour crude oil. The operation essentially requires the addition of a Catalytic Cracking Unit to the Category III or Hydroskimming operation. Such a configuration permits the upgrading of the gas oil portions of residual oil or topped crude to more salable and valuable products. A typical flow scheme for a Catalytic Cracking operation is shown in ATTACHMENT 3.

Category V represents a hydrocracking type operation with a 30,000 bpd capacity, on sour (2.0%S) crude oil. Such an operation is an alternative which might be considered by a small refiner faced with the conversion to high sulfur crude. This operation consists of the addition of a Hydrocracking Unit to the Hydroskimming or Category III operation. Such an addition permits the vacuum gas oil portion of the residual oil or topped crude to be converted to more marketable products which are, generally speaking, desulfurized. The Hydrocracking operation offers improved operating flexibility in that it can be operated to produce a variable range of products from motor fuel to light fuel oils. It can also be operated with lighter feedstock than gas oil. A typical flow scheme for a Hydrocracking type operation is shown in ATTACHMENT 4.

The presentations in ATTACHMENTS 1-4 offer a simplified version of each of the categories described above. In addition to the major process units shown, each catalytic reformer, where indicated, would almost certainly have a

combined catalytic desulfurization unit to pretreat its feedstock. Also, facilities would be included to process and/or desulfurize gases as well as to provide environmental control.

REFINERY COMPLEXITY

Refining complexity factors (as developed, for example, by W. L. Nelson) represent an effort to describe the investment cost of a refinery in terms of the operations which are to be conducted.*/ Such complexity can vary with the type of crude oil being processed as well as with its sulfur content. For estimation purposes, a typical light crude production distribution was estimated along with a typical distribution of sulfur content among the various fractions. ATTACHMENT 5 presents a listing of the estimated capacities for the process units involved in each scheme along with a calculated complexity factor.

REFINERY COSTS

Refinery investment costs were estimated based upon the Nelson Complexity Factor data and related Unit and Offsite Costs. The costs estimated are based upon Gulf Coast erection and are adjusted to reflect the Nelson Refinery Cost Index for December 1979.

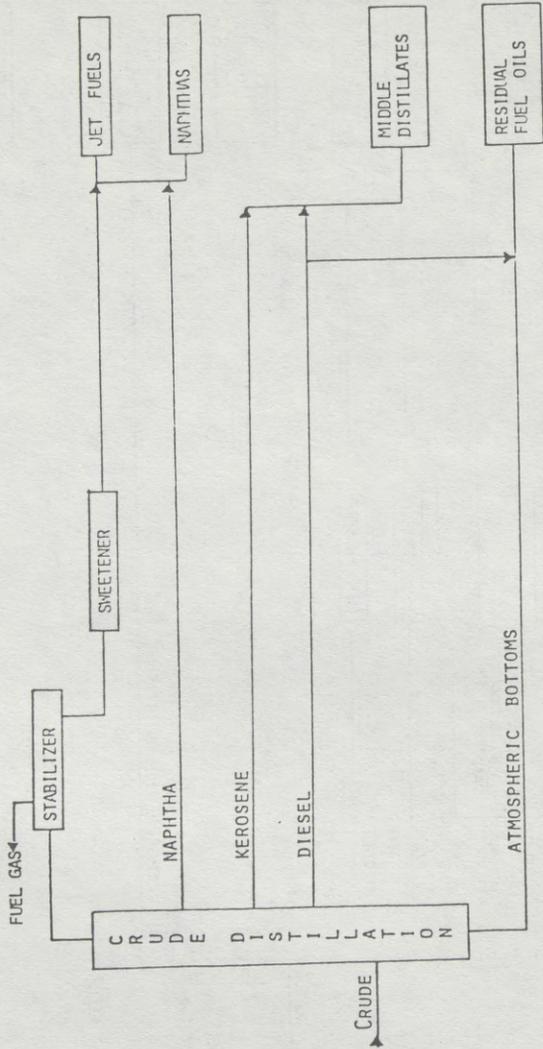
The overall costs for a new refinery in each of the Categories has been estimated and is presented in ATTACHMENT 6. A net additional investment is also reflected for the Category I refiner to expand and upgrade into each of the alternative categories. Also presented in ATTACHMENT 6 is a breakout of the investment for environmental control items. This includes, where involved, the sulfur plant, the desulfurization of gas, environmental controls, and the ecology items if subsumed within offsite costs.

CONCLUSIONS

The investment costs shown herein will vary with location, the specific crude oils involved, and the process selection and product mix desired. A more detailed study might result in only slightly different cost figures. In any event, type and range of investments are believed to be reasonable for the conditions selected. A small refiner faced with the need to convert to semi-sour crude would likely be faced with an expenditure of approximately \$78 million in order to take the first steps toward upgrading both its products and its capacity. In order to incorporate the next gradations of sophistication in its facilities and be able to process crude oil with a still higher sulfur content, this same small refiner would have to spend an additional \$50-62 million, for a total of \$128-140 million; and to make these modifications at a somewhat higher capacity level (50,000 bpd rather than 30,000 bpd) would require substantially greater expenditures--perhaps twice as large as these amounts.

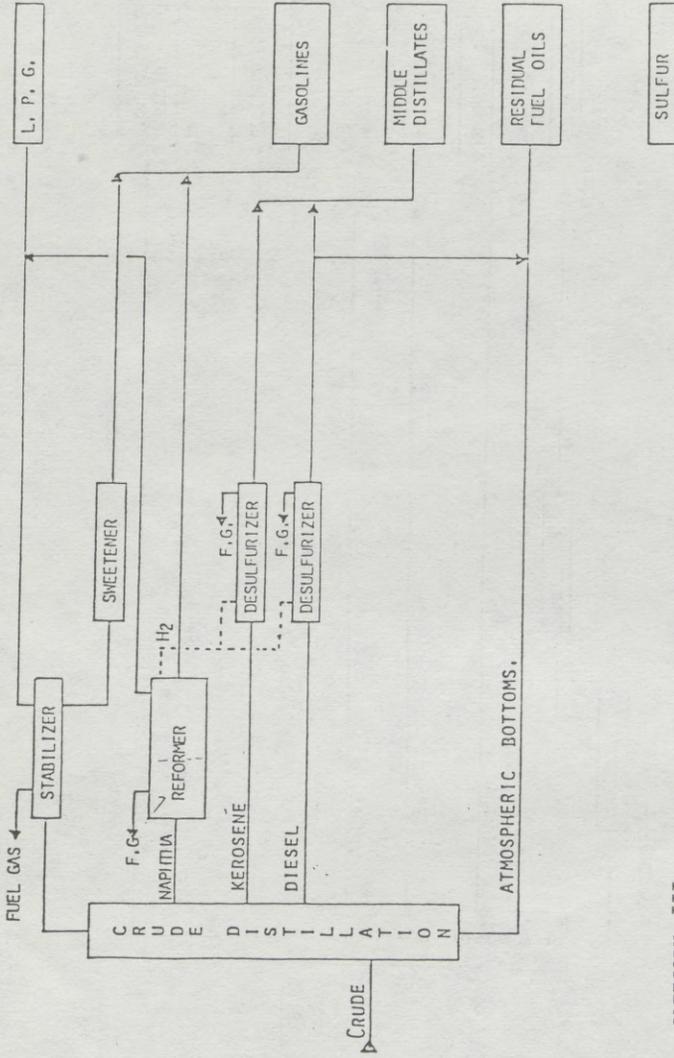
*/ The Nelson factors are widely used, both by government agencies and industry members.

ATTACHMENT 1



CATEGORY I & II Topping Refinery

ATTACHMENT 2



CATEGORY III HYDROSKIMMING REFINERY

ATTACHMENT 5

Category	Item	Process Operation	Complexity Factors (1)	I & II		III		IV		V	
				(MMCFD) BPD	Complexity	(MMCFD) BPD	Complexity	(MMCFD) BPD	Complexity	(MMCFD) BPD	Complexity
	1.	Crude Unit	1.0	8,500/30,000	30,000	1.0	30,000	1.0	30,000	1.0	30,000
	2.	Vacuum Unit	2.0	--	--	--	11,670	0.8	11,670	0.8	11,670
	3.	Naphtha	3.0	--	7,800	0.8	7,800	0.8	7,800	0.8	7,800
	4.	Desulfurizer	0.3	--	7,800	0.1	7,800	0.1	7,800	0.1	7,800
	5.	Splitter	5.0	--	6,000	1.0	6,000	1.0	7,590	1.3	7,590
	6.	Reformer	3.0	--	6,000	0.6	10,500	1.1	10,500	1.1	10,500
	7.	Distillate	10.0	--	--	--	7,200	--	7,200	2.4	7,200
	8.	Hydrocracker	--	--	--	--	--	--	--	--	--
	9.	Catalytic Cracker	6.0	--	--	--	7,200	1.4	--	--	--
	10.	Alkylation Unit	11.0(3)	--	--	--	1,620	0.6	--	--	--
	11.	Gas Processing	1.0(2)	--	--	--	(2.8)	0.1	(2.8)	0.1	(2.8)
	12.	LPG Gas Plant	3.0	--	--	--	576	0.1	576	0.1	576
	13.	Desulfurization of Gases	0.7(2)	--	--	--	(3.1)	0.1	(3.1)	0.1	(3.1)
	14.	Distillate Product Treating and Handling	0.5	5,185/18,300	18,300	0.3	18,300	0.3	18,300	0.3	18,300
	15.	Sulphur Plant	85.0(4)	--	5 IIT/D	NIL	25 IIT/D	0.1	40 IIT/D	0.1	40 IIT/D
	SUBTOTAL										
	16.	Environmental Controls	5.3(5) of above			0.2				0.4	
	TOTAL					4.0				7.9	
											8.6

(1) Complexity adjusted by BPD thruput except where noted.

(2) Based on MCF/D.

(3) Based on BELS/day of product.

(4) Based on long tons/day.

(5) Note that desulfurization of gases and the sulfur plant are also environmental controls. Also the ecology provisions in the offsites would be considered as a part of the environmental package.

(6) Included with hydrocracker cost in Category V.

Category	REFINERY COSTS(1)				
	(in millions)				
	I	II	III	IV	V
Process Unit Costs	4.2	11.8	33.6	66.4	72.2
Offsite Costs	<u>10.5(a)</u>	<u>29.5(b)</u>	<u>57.1(c)</u>	<u>73.7(d)</u>	<u>80.1(e)</u>
TOTAL REFINERY COST	14.7	41.3	90.7	140.1	152.3
Net Additional Investment(2)	--	28.1	77.5	127.9	139.1
Environmental Investment	1.0	2.9	6.3	14.3	15.2
Net Additional Environment Investment		2.0	5.4	13.4	14.3

(1) Assumes that original investment is 90% recovered in the expansion; offsite multipliers based on complexity: (a) 350% (b) 350% (c) 270% (d) 211% (e) 211%.

(2) The costs used herein are based on December 1979 with Gulf Coast erection.

Mr. SHARP. Thank you very much.
The gentleman from New York.

Mr. OTTINGER. No questions.

Mr. SHARP. Gentlemen, I have just one quick question. First, Mr. Beghini, that you do not wish to have further price controls, in the event we get into an emergency and are allocating crude oil, do you feel there would be a need for price control at that time to determine the price when it is allocated?

Mr. BEGHINI. Once the trigger mechanism has been implemented, we have given testimony to the Department of Energy which recommended both an allocation formula and a pricing mechanism, which is part of the record which I have given you.

Mr. SHARP. The reality is that you cannot have one without the other?

Mr. BEGHINI. Right. Although I would like to further state that that program is not one that we recommend. It is not one you take in parts. Our feeling is you take the whole thing or you should be very careful at how you look at the pricing provision.

Mr. SHARP. I am not sure I follow you.

Mr. BEGHINI. The program we submitted is one where we are advocating distribution of crude based on an efficiency formula. We also advocated that spot crude purchases should be excluded from the program. And with those two quids, we then advocated a proper pricing mechanism.

Mr. SHARP. You said exclude the spot, if you purchased—

Mr. BEGHINI. It would be outside the allocation.

Mr. SHARP. It would not be available for allocation.

Mr. BEGHINI. That is right.

Mr. SHARP. But you believe that we ought not to engage in allocation, as Mr. O'Leary was suggesting at one point.

Mr. BEGHINI. We have a complete disagreement with Mr. O'Leary, in that we do not believe the buy/sell program resulted in one additional barrel of oil being refined in this country. It was simply transferred from more efficient plants to less efficient plants.

Mr. SHARP. Through the loss of efficiency, we lost product?

Mr. BEGHINI. That is right.

Mr. SHARP. Had we not had the buy/sell program, we would have been—

Mr. BEGHINI. We would have been better able to respond to the crisis. As it turned out, it was the gasoline.

Mr. SHARP. Mr. Yancey, if I understand correctly, you differ with Mr. Beghini as to when you would begin the buy/sell program.

Mr. BEGHINI. A 20-percent shortfall, Mr. Chairman, is 1,400,000 barrels a day of gasoline, just for starters. I will guarantee, if you let it go 60 days before you correct anything, there will be lines and other things that will be very disagreeable.

Why would we consider 20 percent when the international agency has now set a shortfall of 7 percent? You would never trigger it. You would have to have Saudi Arabia shut completely off, that is one of our largest imports. We import most of our crude from five different countries. You could add three of those up and still not get to the 20 percent. It does not make any sense. It would never be triggered, in my opinion.

Mr. SHARP. So in your opinion, we would need to be ready to operate the program this week, for example?

Mr. YANCEY. There is no question in my mind. Without a stand-by program, actions by the President, have all kinds of limitations because of national security reasons. There may be a lot of other things required to be implemented at that time which he may not want to implement. This country needs a program that is ongoing.

Is there a shortage existing? I think Mr. Lichtblau, and some of the worldwide consultants that we use, feel that we are coming into a period of short supply, maybe not way down but a period of short supply. If any little thing happens, then we are in an emergency.

I agree wholeheartedly with John O'Leary, don't wait until it happens. You better have a program in place before it happens. There are a lot of ways that you can tell what inventories are doing.

Fortunately, this country and the world had a very high crude inventory when the war broke out or we would be in serious trouble right now. Unfortunately, had those companies that have all this crude shared it, we wouldn't have the price surge we have seen recently.

The same thing happened in 1979. It doesn't take much action on the spot market to drive prices up. Once you drive the price up, the producing countries surmise that is what their crude is worth, and that is the reason they raise official prices.

That is the reason OPEC is getting Saudi Arabia to raise \$2, but the ceiling has gone up to \$41, which has some premiums on it

from certain countries so we hear. How long is it going to take us to finally figure out what is going on?

Everybody should share in the supply, keep people out of that spot market and let's go down the road.

As to Saudi Arabia, this country has supported Saudi Arabia since they first started production. That is the reason the four Aramco companies get it.

Why should the whole Nation not share their crude when we have supported that country throughout the years? Thank God for Saudi Arabia. They have been a godsend. This country as a whole, through taxes and through encouragement, has supported Saudi Arabia, but now only four companies are reaping the financial benefit.

Mr. SHARP. Thank you very much.

Gentlemen, this is obviously a subject of many complexities and of great importance and we will be addressing it further.

In the subcommittee this morning we are trying to complete our hearing in the morning session. I appreciate your testimony. We may find it necessary to call on you for additional information. We will certainly make a part of the record the material you have provided us.

Thank you very much.

Our last witness is Mr. Bode, the general counsel to the Emergency Small Independent Refiners Task Force.

STATEMENT OF WILLIAM H. BODE, GENERAL COUNSEL, EMERGENCY SMALL INDEPENDENT REFINERS TASK FORCE

Mr. BODE. Mr. Chairman and members of this committee, my name is William Bode, and I am general counsel to the Emergency Small Independent Refiners Task Force—ESIRTF. ESIRTF includes 17 small independent refiners. The organization was formed approximately 1½ years ago in response to the failure of the Department of Energy to administer its programs in a manner which assured the competitive viability of small independent refiners, as mandated by the U.S. Congress in the Emergency Petroleum Allocation Act of 1973.

To assist this committee in formulating a national refiner policy, I wish to address the following points:

One. Without Government assistance, efficient small refiners cannot survive the postregulatory era.

Two. It is vital that the refining industry include small independent refiners.

Three. Easily administered solutions, which will not disrupt oil markets, can be implemented.

Mr. Chairman and members of the committee, after decontrol, small, efficient refiners will be unable to procure sufficient domestic or foreign crude oil to maintain their operations.

Let's consider the facts. Domestic crude oil production today approximates 8.5 million barrels per day. In contrast, domestic aggregate refining capacity approximates 18.3 million barrels per day.

A study prepared by the Senate Antitrust Committee revealed that the eight largest oil companies in 1973 controlled approximately 68 percent of domestic crude oil production. This production

is controlled directly, through ownership of producing fields, or indirectly, through ownership of the gathering pipelines.

The control by the major oil companies of domestic crude oil production is increasing. The newspapers have followed the acquisition by Shell Oil of the huge resources of Beldridge Oil Co., and by Mobil Oil Corp. of General Crude Oil. Dozens of other independent crude producers have also been acquired by major refiners. ESIRTF is preparing for this committee data which will reflect the increasing control of the domestic crude production by major oil companies through acquisition.

Upon decontrol, less than 2.5 million barrels per day of domestic crude oil production will become available on the "open market," and that is a very conservative figure.

First, even if the 16 largest integrated oil companies are excluded, it would appear that approximately 170 refiners, with a combined capacity of 7.2 million barrels per day, will be competing for these supplies.

Second, it is unrealistic to assume that the major integrated companies will not attempt to capture these remaining crude supplies.

As their controlled production declines, their incentive to replace these volumes with crude oil otherwise available to independent refiners will increase.

Third, the cost of this "open market" crude oil will be prohibitive.

The Office of Oil Policy of the Department of Energy has recently completed a report entitled "Crude Oil Access Study". In this report the DOE recognizes that the integrated companies, because of their crude oil production, "can afford to pay higher prices than the independents for open market supplies."

The DOE has estimated the potential for the integrated companies to subsidize their open market crude oil purchases is substantial:

Using the figure of \$6.45 per barrel derived above for the average cost advantage on domestic production owned by the 16 (integrated companies), calculation shows that the integrated companies could have bid over \$10 per barrel higher than the competitive price for the 3,470 mbd they purchased on the open market in 1979 without raising the integrated companies' average crude prices above the competitive price.

The DOE questions whether the major integrated refiners will subsidize crude oil acquisitions upon decontrol. We have no doubts about that; it is apparent that they will act in this manner.

Indeed, data available as recently as September 30 of this year indicates that the posted prices for uncontrolled domestic crude oil exceeded product revenues by \$3 per barrel, after adjustments for entitlements. A refiner's ability to pay for crude oil is not a function of its product slate; a refiner with hydrocracking capability manufacturing gasoline cannot pay more for crude oil than a refiner with only distillation capability.

Foreign crude oil likewise will be unavailable to small independent refiners in the postregulatory era. Approximately one-half of ESIRTF members have traveled abroad in the last year and a half in an attempt to obtain contracts with foreign producing countries. None have been successful.

A number of ESIRTF members have formed a "buying consortium" and have retained professional representatives to continue this task. No oil has yet been obtained by this group.

In fact, crude oil contracts with OPEC nations have been as elusive as a desert mirage. The DOE study on crude access notes that producing nations increasingly are tying crude sales to commitments by the purchaser to make investments in their countries. Only the largest companies can play this game.

Finally, it must be appreciated by this committee that the few countries which have sold to small independent refiners in the past have been the most price-militant members of OPEC.

A crude oil contract with Nigeria or Libya at prices which may be \$4 to \$5, or more, per barrel higher than OPEC benchmark postings is of no utility to the small independent refiner.

How many small independent refiners will thus be forced from business upon decontrol? In an earlier study, the Office of Oil Policy of DEO estimated that approximately 40 small refiners would shut down.

We believe that this number is too conservative. ESIRTF predicts that no fewer than 75 small independent refiners will be forced from business upon decontrol.

Big oil has attempted to foster the myth that small independent refiners are mere "tea kettles" and inefficient. This is completely false.

The Department of Energy in different contexts has defined "efficiency" in terms of heat exchange losses in the refining process, or as the ability to process sour crude oils into unleaded gasoline—a definition that was alluded to by the Marathon representative.

With respect to the first definition, small independent refiners are probably more efficient than the older refineries of the major companies.

Members of ESIRTF operate distillation units which have been designed and constructed utilizing the latest engineering advances, and which are rigorously maintained. The heat loss in their operation is certainly comparable to the heat loss experienced in the distillation units of the average refinery operated by the majors.

With respect to the production of aviation fuels, naphthas, kerosenes, middle distillates, and residual fuel oils, the small refiner consumes no greater part of a barrel of crude oil than the average major refinery, and is at least as efficient as the average major refinery.

With respect to the second definition of efficiency, ESIRTF asserts that it is simply wrong. If "efficiency" is to be equated with production of gasolines, we must presume a relatively greater demand for gasoline than for other petroleum products. Certainly, no one would claim that it is efficient to expend \$3.50 to \$4 per barrel more in refining costs to manufacture gasoline if additional gasoline were not needed. Yet, this is the situation today.

Mr. Chairman and members of this committee, the fact is that this country needs not one barrel more of additional gasoline refining capacity. Projections by the Department of Energy indicate that demand for gasoline will actually decrease in the future. This reflects better gasoline mileage in the automobile fleet, and reduced consumption because of higher prices.

In contrast, decontrol of natural gas, which will cause utilities and large industrial units to switch to increasingly competitive residual fuel oil and middle distillates, and the introduction of diesel-powered automobiles will likely increase demand for these products.

In this regard, it should be noted that the United States has imported negligible quantities of gasoline in the past 2 to 3 years. Imports of middle distillates and residual fuel oil, however, have exceeded 1 million barrels per day for the last 3 years.

It would appear, then, that small independent refiners who are producing scarce middle distillates and residual fuel oils are more "efficient" than the majors who produce gasoline and the lighter products.

Finally, the most "efficient" refining industry is not one in which every refining entity is capable of refining sour crude oils. Approximately one-half of crude oil imports, and one-half of domestic crude oil production consists of the lighter "sweet" crude oils.

We agree that economies of scale are important in the processing of sour crude oils. This simply means, however, that the largest refiners should process sour crude oils. This is what they can do most efficiently.

The smaller refiners should process sweet crude oils, which is what they can do most efficiently. In this way, the total efficiency of the domestic refining industry is maximized.

From this perspective, it is clear that the allocation of crude oil to small independent refiners is not a misallocation of resources as maintained by major oil company representatives when they privately visit your offices.

The animus of the majors toward the small refiners is easily explained. They fear the competition. Small independent refiners are efficient, they are resourceful and they are creative. They assure that monopoly profits will not be available to major oil companies. They further the competitive model upon which our free market system is based.

That is why the U.S. Congress in section 123 of the Energy Conservation and Production Act (Public Law 94-385) proclaimed its intent to "foster construction of new refineries by small and independent refiners in the United States."

Many members of ESIRTF, in response to this congressional mandate, have invested their fortunes and directed their efforts to the construction and operation of small refineries. We are all better off because they did.

Small refiners are major suppliers of vital petroleum products to the Department of Defense. They are geographically dispersed, thereby enhancing our national security while serving local industries.

If Congress permits small independent refiners to be forced from business, the American economic model will suffer. If this is allowed to happen, the trust which binds the governed to those who govern will be impaired. Small independent refiners must be provided Government assistance.

ESIRTF believes that the establishment by Congress of any of the following programs would assure a vigorous refining industry upon decontrol. Let me enumerate our recommendations.

One, ESIRTF recommends that the windfall profit tax be amended to exempt from taxation the first 1,000 barrels per day of independent crude production processed by small independent refiners.

The adoption of this amendment would encourage capital formation by independent crude producers, while assuring the competitive vitality of small independent refiners. Were such an amendment adopted, Congress would be required to do nothing further in the area of national refining policy.

Small refiners and independent crude producers would form an alliance to offset the huge economic power represented by major oil companies in our economy.

Two, adoption of an oil import fee on crude oil:

ESIRTF recommends that a fee of approximately \$5 per barrel on crude oil imports be imposed on all importers except qualifying small independent refiners.

The former oil import control program provided this form of protection for small refiners for over 14 years. It was this exemption which formed the basis for the small refiner bias under the entitlements program.

A number of distinguished petroleum experts and economists have recommended the immediate implementation of such a tariff. Import fees would not only protect the country from increased dependence upon imported crude oil, but would also assure the maintenance of competition during shortages.

Three, an oil import agency: ESIRTF recommends that Congress consider the establishment of an agency to oversee the importation and distribution of all foreign crude oil. A special preference for small refiners could be administered by that agency. The establishment of such an import agency is supported by countless, compelling factors.

In a world as complex as ours, it is surprising that this Nation's very lifeline is left to a handful of companies motivated primarily by their own private financial interests.

We believe that the stark realities of international politics makes the establishment of an oil import agency inevitable. We believe that the sooner such an agency is established, the better.

Four, modification of the Federal royalty crude oil program: ESIRTF recommends that Congress consider amending the programs which assure small refiners access to Federal royalty crude oil in several ways.

First, legislation should be adopted which requires the U.S. Geological Survey to make available to small refiners all Federal royalty crude oil.

At the present time, only a fraction of this crude oil is available to small independent refiners.

Second, we recommend that the price at which such crude oil is offered to small refiners not exceed the fair market value of such crude oil minus the windfall profit tax. This would assure that the price of the crude oil made available under the program is, in fact, competitive.

Five, ESIRTF recommends that, until one of the above programs is adopted, Congress order the continuation of the buy/sell crude oil program now administered by the Economic Regulatory Admin-

istration. ESIRTF recommends, however, that the program be modified in several aspects.

First, we recommend that all existing small refiners be eligible to participate.

Second, we recommend that the program provide that refiner-sellers sell at their weighted average cost of all crude oil, foreign and domestic.

At the present time, many refiner-sellers purchase the crude oil with which to fulfill their obligations under the buy/sell program on the spot market at very high prices, and pass that price on to the refiner-buyer. This practice by refiner-sellers completely undermines the utility of the program today.

We believe careful analysis will reveal the costs, the regulatory burdens, associated with each of these programs is insignificant in relation to their benefits to the public. Consider this: For every 1 cent per gallon on increase in the price of petroleum products that is deferred, the public saves \$2.6 billion annually.

That is the benefit of competition. That is this country's stake in a vigorous competitive refining industry.

We appreciate the opportunity to present our views on a subject of overriding importance to the country and to the next Congress.

Mr. SHARP. Thank you.

Do you have any questions, Mr. Ottinger?

Mr. OTTINGER. No.

Mr. SHARP. Mr. Bode, we thank you for your testimony today.

The subcommittee will stand adjourned.

Obviously, the issue will be getting considerable attention in the next Congress and we appreciate the cooperation of the witnesses today.

[The following letters and statements were received for the record:]

NINETY-SIXTH CONGRESS

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CONGRESS OF THE UNITED STATES
 HOUSE OF REPRESENTATIVES
 SUBCOMMITTEE ON ENERGY AND POWER
 OF THE
 COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE
 WASHINGTON, D.C. 20515

December 10, 1980

The Honorable Charles W. Duncan, Jr.
 Secretary
 Department of Energy
 Forrestal Building
 1000 Independence Avenue, S.W.
 Washington, D.C. 20585

Dear Mr. Secretary:

There is a serious problem developing with respect to the operation of the Department's Entitlements Program. This problem, which is detailed below, may disrupt our domestic refinery industry and unnecessarily increase the costs of refined petroleum products to consumers.

The purpose of the Department's Entitlements Program is to spread the benefits of domestic price controlled crude oil among all domestic refiners. Without a cost equalization program, refiners who have greater than average access to low cost price controlled domestic crude oil would have an unfair advantage over refiners who have to refine higher cost foreign crude oil or uncontrolled domestic oil.

Entitlements represent the right to process a barrel of domestic price controlled oil. Under normal circumstances, the total number of entitlements issued each month is equal to the total number of barrels of domestic price controlled oil received by all domestic refiners in that month. Entitlements are allocated equally to domestic refiners based on the national average share of domestic price controlled crude oil.

Thus, refiners who process more than the national average share of domestic price controlled crude oil must purchase entitlements from those refiners who process less than the national average share of price controlled crude oil. In this manner, the refiner acquisition costs for crude oil are generally equalized.

Although the purpose of the Entitlements Program is to spread the benefits of domestic price controlled crude oil among all domestic refiners, it is also used to subsidize small refiners, imports of residual fuel oil into the East Coast, California heavy crude oil, exceptions and appeals relief and Strategic Petroleum Reserve purchases by the United States government. In order to provide additional entitlements to these subsidized beneficiaries, the total

number of additional entitlements issued to subsidized beneficiaries is subtracted from the number of barrels of domestic price controlled oil. This results in less entitlements for sale by refiner sellers and more entitlements to be purchased by refiner buyers. The sum of the reduction in entitlements for sale and the increase in entitlements to be purchased equals the additional entitlements provided by the subsidies.

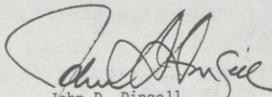
As domestic oil is decontrolled, the number of entitlements decreases. When the number of subsidy entitlements equals or exceeds available entitlements (barrels of domestic price controlled oil), all refiners will be required to contribute into the entitlements program to pay for these subsidies. If current trends continue, this will occur in March or April of 1981. When this occurs, most refiners will be paying more than the market price for oil so that the subsidies contained in the Entitlements Program may be continued.

We are very much concerned with respect to the potential effects on our domestic refining industry of continuing a regulatory program which no longer spreads the benefits of price controlled crude oil among all refiners but instead results in a subsidy program for small refiners and increases the price of refined petroleum products to all consumers.

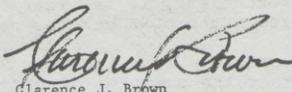
Accordingly, we request that the Department of Energy indicate whether or not it will continue the operation of the Entitlements Program after the subsidies provided by the Entitlements Program exceed the available supply of domestic price controlled crude oil (in technical terms when the runs credit becomes negative). In addition, we request that the Department provide its analysis of this phenomenon and indicate which domestic refineries will become net-purchasers, instead of net-sellers, of entitlements when the runs credit becomes negative.

Inasmuch as the formulation of domestic refinery policy is a priority matter, and because this phenomenon in the Entitlements Program is predicted to occur early in the spring of 1981, your response should be forwarded to the Subcommittee no later than January 15, 1981.

Sincerely,



John D. Dingell
Chairman



Clarence J. Brown
Ranking Minority Member

JDD/lc



THE SECRETARY OF ENERGY
WASHINGTON, D.C. 20585

January 19, 1981

Honorable John D. Dingell
Chairman, Subcommittee on Energy and Power
Committee on Interstate and Foreign Commerce
House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

This is in response to your letter concerning the problem with the Entitlements Program when the number of "subsidy" entitlements exceeds the number of barrels of deemed old oil.

The Economic Regulatory Administration is studying solutions to this problem. The Department's General Counsel has determined that current regulations would not, for example, require a refiner that refines only imported oil to purchase entitlements when the domestic old oil supply ratio (DOSR) becomes a negative number. Rather, it is the view of the General Counsel that the current regulations do not provide for the situation when the DOSR becomes negative. Thus, we do not believe that the current regulations would, if unchanged, increase the price of oil to an above-market level. Nevertheless, it is clear that regulatory action is required before the DOSR becomes negative.

At the present time, the Economic Regulatory Administration estimates that the amount of "subsidy" entitlements will overtake the number of barrels of deemed old oil in May 1981. This event would be reflected on the entitlements list of July 1981. We have advised the transition team of this problem, and we foresee no obstacle to reaching a solution before that time.

We appreciate your concern, and we will keep you informed of our progress.

Sincerely,

Lynn R. Coleman
Deputy Secretary

By this reference, I assume my successor will
LRC

CITIES SERVICE COMPANY

BOX 300 . TULSA, OKLAHOMA 74102

ROBERT H. CHITWOOD
EXECUTIVE VICE PRESIDENT

December 8, 1980

Honorable John D. Dingell
2221 Rayburn House Office Building
Washington, DC 20515

Dear Mr. Dingell:

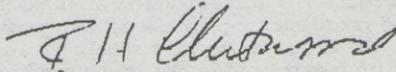
We understand that the Subcommittee on Energy and Power of the House Committee on Interstate and Foreign Commerce has tentatively scheduled hearings for December 16th on Refinery Policy.

Cities Service Company is in complete agreement with the need for the government to establish appropriate policies to insure the long term domestic capability to adequately provide the required fuels for the national security and the economic needs of the nation.

However, we question the appropriateness of the timing of the December 16 hearing. We believe the hearings would be more productive following the installation of the new Administration and the new Congress. We, and we understand other companies, are in the process of formulating position documents relating to refinery policy after EPCA expiration in light of the overall economic situation and circumstances expected to prevail under the new Administration. We believe that the new Administration's views on refinery policy should be sought as part of any hearings, and that their views and programs for many other sectors of the economy will bear directly or indirectly on what may be recommended in the refinery sector.

In short, it is our opinion that the proposed December 16 hearings will be inadequate and premature. We respectfully suggest that more appropriate hearings be rescheduled early next year and we hope that we will be given the opportunity to present our views then.

Sincerely,



CITIES SERVICE COMPANY

BOX 300

TULSA, OKLAHOMA 74102

December 16, 1980

Honorable John D. Dingell
2221 Rayburn House Office Building
Washington, D. C. 20515

Dear Mr. Dingell,

We appreciate the opportunity to submit this letter which we understand will become part of the written record on Refinery Policy hearings that are to be held December 17 by the Subcommittee on Energy and Power of the House Committee on Interstate and Foreign Commerce.

Inasmuch as Refinery Policy is a complex issue, we hope that there will be additional hearings when the 97th Congress convenes in January. When those hearings are scheduled, Cities Service would welcome the opportunity to present oral testimony. For now there are several points I would like to make.

Cities Service Company believes that the government's authority to control prices and the allocation of crude oil as provided for in the Emergency Petroleum Allocation Act be allowed to expire as planned no later than September 30, 1981 and that no new legislation be adopted for access to crude oil. Furthermore, the Company would favor termination of such controls earlier than the planned date of expiration.

Expiration of the EPAA will not hinder the ability of refiners to gain access to crude oil. It will, however, be of great benefit to the nation as it helps solve our energy problems, encourages efficiency and eliminates bureaucracy. While Cities Service believes Government Royalty oil could be distributed more equitably via normal market channels, we recognize that this oil can be a significant source of supply to small refiners as provided by existing legislation.

We also believe that termination of controls on product price and allocation should occur no later than September 30, 1981. The Petroleum Marketing Practices Act of 1978 already provides marketers with protection that far exceeds that given to other lines of business.

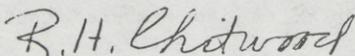
It is in the nation's interest to be prepared in advance to assess and deal with supply emergencies. Therefore, Cities Service supports the formalization of plans that provide an orderly and coordinated response to emergency situations. At the same time, these stand-by plans should include provisions for expiration of controls when the emergency has ended.

Emergency plans should also include principles to ensure judicious use of the Strategic Petroleum Reserve. Those plans should outline conditions under which the SPR oil would be released, the quantity that will be released and how prices will be determined.

The problem of high capital costs is a very serious obstacle to adequate and needed conversion of refining facilities to meet changing crude and product requirements. Certain economic actions are essential to develop the proper type of refining facilities for the products in greatest demand from the crude in greatest supply. The most productive would be legislation providing for accelerated depreciation on capital investments which is also needed by all capital intensive industries to encourage increased productivity throughout the economy.

No product tariffs or quotas are needed at this time and can be avoided in the future if foreign refiners are convinced that the U. S. Government will take action to maintain a strong domestic refining industry.

Sincerely,



Robert H. Chitwood
Executive Vice President

RHC/mes

Statement of
Gregg Potvin
Counsel
Independent Marketers
for Free Markets

Thank you for the opportunity to present this statement. The Subcommittee is to be commended on holding this timely hearing.

This statement is filed on behalf of the Independent Marketers for Free Markets, a non profit association representing small business gasoline marketers. The unifying belief of the IM/FM is its members' unconditional support of the decontrol of gasoline.

While it is hoped that Congress will consider the needs of small business marketers and the consumers they serve -- particularly with respect to those problems which accompany or follow decontrol -- decontrol should not be conditioned on the prior passage of such provisions.

We have too long been subject to the whims and vagaries of a demonstrably less than wholly competent bureaucracy attempting to administer a maze of regulations which are both unintelligible and devoid of any trace of internal cohesive logic. Marketers cannot continue to survive under these conditions.

Worse, recent changes in DOE regulations have eliminated the safeguards extended to small business marketers to a great degree -- the Equal Application Rule has been eliminated and the Normal Business Practice Rule has been cut back. The burdens upon the small business marketers have, conversely, been extended and continued.

Your advocacy of the utilization of the Noerr doctrine is both seminal and constructive. If -- as you have suggested, refiners and marketers and similar pairings with disagreements will meet and seek consensus as to the legislation which should accompany decontrol -- the entire task can be reduced to more workable proportions for the Congress. It is heartening to note that one refiner -- Conoco -- has already completed this task with apparent success.

It is our hope that to the extent that Noerr type negotiations do not produce consensus that the Subcommittee will then focus its attentions on refiner policies with respect to independent marketers, both branded and unbranded. Currently, the spate of announcements by refiners concerning "pull out" areas strongly suggests that particular attention will have to be devoted to this aspect of the problem.

Both our opening theme and our closing reiteration must necessarily stress a simple but deeply felt statement of fact -- a position which has the most profound implications for the future and survival of independent marketers --

We want out -- now.

Thank you again for this opportunity to present the view of Independent Marketers for Free Markets.

BEFORE THE
SUBCOMMITTEE ON ENERGY AND POWER
OF THE
HOUSE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE

STATEMENT OF THE
SOCIETY OF INDEPENDENT GASOLINE MARKETERS OF AMERICA

WITH RESPECT TO
DOMESTIC REFINERY POLICY

DECEMBER 17, 1980

This statement is submitted on behalf of the Society of Independent Gasoline Marketers of America (SIGMA). SIGMA is a trade association comprised of approximately 260 independent private brand marketers and chain retailers of motor gasoline. SIGMA's members market motor gasoline in 49 of the 50 states. They operate approximately 13,000 retail outlets and employ between 40,000 and 50,000 individuals. SIGMA members' sales of motor gasoline represent between 10 and 15 percent of the domestic retail market for motor gasoline.

The competitive viability of a private brand marketer, such as a SIGMA member, is premised upon its marketing efficiencies. Specifically, SIGMA members have built their businesses on the basis of their ability to deliver motor gasoline to customers at a lower cost than their competitors. To achieve these cost efficiencies private brand marketers have been required to innovate marketing techniques. For example, private brand marketers pioneered the self service marketing concept. However, SIGMA's members are totally dependent upon the existence of competition at the wholesale level, i.e., the level at which SIGMA members buy gasoline, to render their marketing efficiencies meaningful in the market place. The ability

of a private brand marketer to deliver gasoline to a consumer at a cost of one to one and one-half cents per gallon less than its competitor's cost of delivery is meaningful only if that private brand marketer can purchase gasoline at a price which is comparable to the price paid by its competitors.

SIGMA generally opposes the government's intervention in the petroleum industry, particularly during periods in which supplies of crude oil and refined products are sufficient to permit historic market forces to function efficiently. Thus, SIGMA endorses the concept of "free trading" petroleum. SIGMA endorses government intervention in the petroleum industry only under circumstances in which the operation of historic market forces is inhibited.

To the extent that the government deems it necessary to intervene in the petroleum industry, it is essential that the government recognize that such participation in the market place distorts and alters the economic assumptions upon which the market's normal operation is premised. As a result, government intervention in a market place can have serious anti-competitive effects. These anti-competitive effects are most likely to arise in circumstances in which the government's intervention in the market place is designed to afford a particular segment of the market protection.

SIGMA strongly endorses a vital, highly competitive domestic refining industry. The existence of such a competitive refining segment of the petroleum market would generate increased supplies of motor gasoline and would invigorate competition at the level at which SIGMA's members purchase gasoline. As previously noted, competition

at the wholesale level is a condition precedent to SIGMA members' marketing efficiencies being relevant in the retail market. The viability of the independent segment of the refining industry is viewed by SIGMA as being essential to the achievement of the general objective of a highly competitive domestic refining industry. Therefore, SIGMA generally would endorse the government's responding to circumstances which have been demonstrated to constitute a threat to the competitive structure of the refining segment of the petroleum industry. However, SIGMA's endorsement of such action is expressly conditioned upon such action's being structured in a manner which does not inflict irreparable injury on the competitive viability of the marketing segment of the petroleum industry.

Congress must recognize that any action taken to insulate or protect one segment of the petroleum industry, such as independent refiners, from existing market conditions has a palpable effect on other participants in the petroleum industry. Thus, one cannot reasonably discuss a refinery policy without also considering the implications of such a policy on the marketing segment of the petroleum industry. Simply stated, refiners compete with independent marketers. The insulation of one segment of the refining industry from existing market conditions, of necessity, must have repercussions for their independent marketer competitors to whom no similar protection is afforded. An example will demonstrate the necessity for addressing the issue of a refinery policy in the broader context of the refined products market.

SIGMA is aware that some participants in the petroleum industry have proposed the establishment of significant barriers, either tariffs or import license fees, to the importation of refined petroleum products. It is SIGMA's understanding that the proponents of such action support their proposal through two lines of argument: (1) significant import barriers would enhance the competitive viability of independent refiners, and (2) significant import barriers, by preserving independent refiners, would contribute to the national defense. However, Congress must recognize that the establishment of significant barriers to the importation of refined petroleum products could inflict significant and irreparable damage upon the competitive viability of independent marketers by effectively eliminating such marketers' supply options and thereby reducing the incentive for refiners to supply independent marketers.

Limiting the supply options for the independent marketing segment of the petroleum industry effectly would eliminate the economic incentive for refiner-marketers to supply their customer-competitors. The incentive for a refiner-marketer to supply its marketer-competitors with refined products at a price which permits those marketers to compete effectively in the market place is based upon the necessity for a refiner-marketer to move its supplies of refined petroleum products at a profit. If an independent marketer can obtain supplies of refined petroleum products at a price which will permit it to compete effectively with a refiner-marketer, then that refiner-marketer, in order to move its product at a profit, must be able to compete with that independent marketer through marketing

efficiencies. If the refiner-marketer's distribution system is not as efficient as its independent marketer-competitor's, it will be unable to move its supplies of refined petroleum products at a profit. Under such circumstances, the logical economic choice for that refiner-marketer is to supply refined product to an independent marketer at a profit, i.e., the refiner-marketer will compete at the wholesale level rather than competing at a lower level of distribution where its efficiencies are not as great as an independent marketer's.

In direct contrast to the foregoing, if an independent marketer's supply options are limited artificially, its refiner-competitors will not supply that independent marketer with product at a price which will permit that independent marketer to compete with them effectively because they will not be required to face that independent marketer's competition in the market place. Specifically, if a refiner-marketer is aware that existing conditions in the market place effectively preclude an independent marketer from obtaining motor gasoline, or any other refined petroleum product, at a price below a specified level, then that refiner-marketer can eliminate its independent marketer-competitor simply by offering product to that independent marketer at a price equal to the price at which it offers that product to the independent marketer's customers. Under such circumstances, an independent marketer's cost efficiencies will be rendered irrelevant and it will be driven from the market place.

The threat of market entry by foreign refiners would serve as an effective deterrent to such behavior. Moreover, by deterring this kind of behavior, the threat of market entry by foreign refiners

would assure that competition at each level of the petroleum industry is based upon marketing efficiencies rather than an artificially instituted market advantage. In short, the mere threat of market entry by foreign refiners would insure that consumers of refined petroleum products are provided with such product on the most competitive basis.

In summary, if Congress were to deem the imposition of import barriers necessary, it is essential that such barriers be structured in a manner which insures that the protection which they create is not employed to the disadvantage of other participants in the market place. One possible way of achieving this objective would be the creation of a mechanism, similar to the old Oil Import Appeals Board, which would provide independent marketers with an effective supply option in the event domestic refiners attempt to exploit unfairly the protection afforded them by import barriers.

In conclusion, a vibrant, highly competitive refining segment of the petroleum industry is essential to SIGMA. However, any government program intended to enhance the competitive viability of the domestic refining segment of the petroleum industry must be designed in a manner which does not impose an unnecessary and anticompetitive injury on the marketing segment of the petroleum industry.

It is not SIGMA's purpose in these comments to endorse or oppose any particular program or proposal. Rather, SIGMA requests only that this Subcommittee recognize the danger of addressing the issue of a national refinery policy in a narrow context without regard

to the implications of any such policy for the marketing segment of the petroleum industry. The market for refined petroleum products is a complex and sensitive system which is highly susceptible to distortion by governmental intervention. Thus, any such intervention should be undertaken only after the completion of a thorough analysis of its implications for the entire refined products distribution system.

STATEMENT
of
OIL, CHEMICAL AND ATOMIC WORKERS
INTERNATIONAL UNION
on
DOMESTIC REFINERY POLICY
to
SUBCOMMITTEE ON ENERGY AND POWER
House Committee on Interstate and Foreign Commerce

December 17, 1980

The Oil, Chemical and Atomic Workers International Union represents around 60,000 workers in U.S. oil refineries, a majority of the workers in this industry. Our union, with the wellbeing of these workers at stake, has a clear interest in the operations of the refineries in which its members are employed.

As matters now stand, the decontrol of crude oil at the end of next September threatens us with a flood of imports of foreign oil products which will further depress the already low percentage of U.S. refinery capacity now being utilized. In the situation following total oil decontrol, it is likely that a number of the economically weaker refineries will be forced to close with a sizeable loss of employment for our refinery membership. Already, under the phased decontrol which commenced in June, 1978, substantial inequities have arisen in the access of independent refiners to crude oil at fair and competitive prices threatening the survival of some of these refineries.

In this document we shall analyze from the Union point of view the nature of the economic difficulties that will face the domestic

refining industry with the end of crude oil decontrol. At this point in time, we shall not propose policies in any detail which would resolve the dilemmas of the domestic refining industry. A consistent OCAW policy on domestic refineries will be presented to the incoming 97th Congress.

At the outset, we reiterate the firm opposition of OCAW to the decontrol of domestic crude oil as contrary to national interest. While superficially it may seem good policy to restore market forces in the trade of crude oil and oil products in the U.S., the end result of this policy would be to place the pricing of oil in a few hands outside this country.

In point of fact, as long as the OPEC cartel persists, there can be no free market in oil, either on a world basis or within the United States. To pretend that a local "free market" can be created by the decontrol of domestic crude oil, in the face of the fact that more than 40% of the crude oil consumed in the U.S. is imported, is rank self-deception. The policy of crude oil decontrol will, for all time, tie U.S. oil prices to those of the OPEC cartel. There is no limit to future rises in OPEC prices. If the world situation deteriorates further, increases in OPEC prices can be truly precipitous.

The loss of control over U.S. oil prices, beginning with the present partial decontrol under the "phased decontrol" program, is already gravely distorting the U.S. economy. There will be no winners, except for sections of the oil industry. Oil pricing is the predominant element in the present accelerating inflation.

Non-oil industry, beginning with automobiles, rubber and steel is on the downgrade.

Decontrol, followed by a steep OPEC price increase, such as the quadrupling that occurred in 1973-1974, could lead to an economic disaster in this country. In 1973-1974, the U.S. economy was partially shielded by the controls which were instituted under the Emergency Petroleum Allocation Act of 1973 (EPAA). A bogus "free market" mindset could make a repeat of economic safeguards by legislation such as EPAA very difficult to bring about.

The present crude oil entitlements program protects domestic refiners from large imports of foreign oil products. An "entitlements benefit" is given to the refiners of all oil, both domestic and imported. The entitlements benefit is now around \$5.00. (Except for a partial entitlement paid to importers of residual oil, importers of oil products receive no entitlements benefits.) The entitlements benefit on crude oil imports makes it more profitable to refine foreign crude oil in the U.S. rather than to refine it abroad, import the products and receive no entitlements benefit. The entitlements benefit on imported crude oil offsets the lower costs of refining abroad and the additional benefits of IRS foreign tax credits for foreign operations. No parallel credits are allowed for State taxes.

The end of the entitlements program will leave all domestic refineries fully exposed to competition from foreign refineries, particularly from those in the Caribbean area. Elements which lead to lower unit costs of foreign refineries are lower capital, land and labor costs, lower costs of compliance with weak or non-

existent environmental and workers' health and safety regulations, and above all lower foreign taxes and foreign tax credits on certain of these taxes which cancels out the cost of those taxes completely for U.S. companies operating refineries abroad.

A further inducement for imports from foreign refineries is the abnormally low utilization of foreign refinery capacity because of current world economic conditions. Higher utilization of capacity of these refineries would substantially lower unit costs for the products refined. The net unit cost of increased production of oil products is not the average cost but the lower incremental costs of putting through the additional material.

The effect of the entitlements benefit in limiting imports of foreign oil products is a very pronounced one as shown by historical evidence. In 1973, without entitlements benefits, the proportion of oil imports arriving in the form of products rather than crude oil was close to 50%. In 1979, the proportion of products in the oil import total was around 20%. Between the two years, the imports of crude oil doubled, going from an average of 3.244 to 6.411 million barrels per day. If the 1973 50% proportion of oil products in total oil imports were restored, present product imports would increase by 1.8 million barrels per day or 80%.

Other factors remaining the same, the utilization of refinery capacity would fall from the present 73% down to utilizations in the low 60%'s. Lower capacity utilization would raise significantly the unit costs of refining oil in this country.

Entitlements benefits for imported crude oil must, however, be viewed in their total context. Thus, while entitlements have had a beneficial effect in lowering the volume of imported oil products, the entitlements benefits were a major contributor in the growth of imported crude oil between 1973 and 1979.

To illustrate the present situation, let us consider the position of an integrated multinational oil company with production capacity both abroad and in the United States. Corporate policy may be either to favor increased crude oil imports to the U.S. from their foreign production or to expand production from their properties at home. The import entitlements benefit provides a major incentive for importing crude oil. Other incentives are the benefits of foreign tax credits and generally lower costs. Disincentives to these companies for increased domestic production are lower wellhead prices of controlled crude and "Windfall Profits" and State taxes which count only as ordinary business expenses under IRS rules.

The several incentives for imports undoubtedly contributed heavily to the steeply increasing volume of oil imports from 1973 through 1979. In 1980, this trend has been abruptly reversed. The sharp decline in oil consumption this year because of conservation, higher consumer prices, and the recession has been absorbed exclusively by a major decline in oil imports from 8.3 million barrels per day.

Since corporate decisions are made primarily on the basis of relative profitabilities, the foregoing can only mean that the increases of domestic wellhead prices of this year have made domestic

production of the marginal barrel of oil more profitable than the alternative of producing abroad and importing. This is in spite of the continuing incentives for oil importing offered by import entitlements benefits and foreign tax credits. It is evident that ending import entitlements and foreign tax credits would provide further incentives for stimulating domestic oil production.

The considerations spelled out thus far leaves us with the knotty problem of how best to develop a domestic refinery policy that would prevent a flood of oil product imports when the entitlements program is ended, while not providing indirect incentives for increased imports of crude oil.

The general objectives of a desirable domestic refinery policy are (1) to retain the present level of refinery capacity so that the nation will not increase its dependence on foreign refineries for its supply of oil products, (2) to promote the viability of independent refiners and (3) to reduce the total volume of imported oil, both crude oil and products.

The Department of Energy (DOE) has stated that increased dependence of the U.S. on foreign refineries would not affect national defense. DOE maintains that the U.S. is already dependent on a fraction of imported oil to fulfill its needs and that it does not matter if the oil arrives in the form of crude oil or of oil products. DOE argues that a cut-off of crude oil supply from abroad, say from the Middle East, would be no more serious if it involved imported products made abroad from the cut-off crude than the direct cut-off of crude imported for use by U.S. refineries. OCAW

takes strong exception to this view. We believe that the DOE argument can be readily demonstrated to be faulty.

There is a wide range of types of crude oil now being imported into the United States. These vary from light to heavy, from sweet to sour and from highly paraffinic to highly aromatic. In a time of international emergency, it is quite possible that the types of crudes available for import would shift considerably. For example, the available volume of sweet light crude might drop considerably. The National Petroleum Council has just approved a report on Refinery Flexibility which demonstrates that domestic refineries are fully capable of handling abrupt shifts in the properties of input crudes as might occur in an international emergency.

No such assurance can be given for the availability of a slate of foreign products adequate to handle U.S. needs in the event of a major international emergency involving either a crude oil cut-off or the operations of one or more refining centers supplying the U.S. The U.S. needs for particular products are highly specific and can not be interchanged by increased supplies of another product. As one example, motor gasoline in short supply can not be replaced by distillate heating oil. Even the four commercial grades of gasoline can not be readily interchanged.

Thus, if U.S. refining capacity were allowed to decay following the decontrol of domestic crude oil, there would be serious consequences with respect to national defense. Both U.S. military hardware and the associated civilian economy are highly dependent on specific oil products for their functioning.

Another question raised by the decontrol of domestic crude oil is the access of all refiners at equitable prices. This problem has already emerged under the present phased decontrol program. Under the existing set of regulations of the entitlements program, not all refiners pay the same after-entitlements price for crude oil. Those refiners having access only to decontrolled new oil are paying several dollars more for their input crude. The refiners affected by this kind of inequity are all independent refiners as far as we have been able to ascertain. This leads to a reversal of the normal situation, as far as independents impact the retail market. The independent refiners now have to charge more for their products than the majors instead of being able to shave prices competitively.

With total decontrol of crude oil, disparities in the pricing of crude oil are likely to increase with widening price differentials between internal transfers, swapping, contract and domestic spot market. In view of the strong market power of the integrated majors, there is no assurance that, under decontrol, independent refiners will have equitable access to crude oil at competitive prices, particularly during periods of crude oil deficit.

Finally, there is danger that the decontrol of domestic crude oil will tend to increase oil imports in an unexpected way. With the loss of the economic advantage of refining foreign crude oil in the United States rather than abroad, the essential competition will be between imported products made from foreign crude oil and domestic products made from domestic crude oil. Thus the higher

profitability of foreign crude oil vis a vis domestic crude oil will be added to the higher profitability of foreign refineries to yield a double dividend. The competitive advantage of foreign oil products will then draw in additional amounts of foreign oil. The problem will therefore be more serious than the simple competition between foreign crude refined abroad against foreign crude refined in the United States.

With regard to the cost differentials between foreign and domestic refineries, several remedies have been proposed. These will now be discussed. It should be understood that OCAW is not now prepared to endorse any of these proposals in full or in part. The full OCAW position on domestic refining policy will be put forward in the coming 97th Congress.

There is one covert policy direction that OCAW is emphatically against. That is the set of policies that would seek to equalize costs between foreign and domestic refineries by (1) allowing wages and economic benefits of U.S. refinery workers to lag behind inflation, (2) degrading environmental protection standards and (3) failing to push forward on workers' health and safety. The ultimate results of these kinds of policies would be to reduce the quality of life in the United States to the level of less advanced countries.

In the refining industry, in particular, this kind of retrogression must not be allowed to take place.

Worker productivity in U.S. refineries is high because of extensive automation. Refinery labor costs amount to a small frac-

tion of one cent per gallon. No competitive advantages to domestic refineries will accrue from attempts to slash real wages.

The degradation of standards for environmental protection, such as air and water quality, would in the end, prove to be counter-productive. Oil refineries are not the best neighbors in any residential or industrial area. To allow more pollution from refineries can only lead to more ill-feeling against the oil industry, which the industry can not afford.

A large fraction of the substances to which refinery workers are exposed to are toxic. Asbestos, benzene, cresylic acids and many other harmful materials are common in the refinery environment. OCAW has taken the lead in fighting to reduce refinery workers' exposure. In most cases, the costs of retrofitting, or of better design in the case of refinery modernization, are negligible in comparison with the benefits obtained by the industry itself in terms of both better mechanical efficiency and improved workers' morale.

The degradation of pay and working conditions has not been put forward explicitly by the oil companies. The proposals for degradation are advanced implicitly by industrial associations which call for anti-labor legislation, the lowering of air and water quality standards and the weakening of OSHA.

We shall now turn to more specific proposals for preventing the anticipated flood of imported foreign oil products when the decontrol of domestic crude oil becomes total.

The most straightforward of these policy proposals is one calling for the imposition of a tariff or import fee on imported oil products. The amount of the fee proposed is the difference in the average unit costs of foreign and domestic refineries. However, as shown in the appendices of the NPC report on Refinery Flexibility, refinery costs vary with refinery location, refinery size and the complexity factor of the refinery. Similar variations in refinery costs have been estimated for refineries abroad. The refining costs of different oil products from a given refinery may also be expected to vary widely although these differences in costs have not been publicly analyzed.

In view of this, a flat import fee on all products would fail to make some refineries competitive while overcompensating some others. However, a variable fee to reflect these individual differences would of course be administratively impossible and probably unconstitutional. S.1684 on domestic refinery policy, introduced by Bennett Johnston in the current 96th Congress would provide a flat \$1.26 per barrel fee on all imported products.

The principal difficulty with an import fee is the excessive cost to consumers which would be perceived by the public as a subsidy to the most affluent industry of all. The purpose of an import fee is to enable domestic refiners to raise prices by the amount of the fee to take account of the higher costs of domestic oil products compared to imports. The total cost to consumers is then the import fee paid by the importers of foreign oil plus the price rise on domestic products made possible by the import fee.

At a total consumption of all oil products of 16.4 million barrels per day (DOE Weekly Petroleum Status Report, Dec. 5, 1980) the cost to consumers of a \$1.26 import fee would be \$7.5 billion per year.

The consumers of residual oil in the Northeastern States would be doubly disadvantaged. Each barrel of residual oil now imported receives a half entitlements benefit which now amounts to about \$2.50. In addition to the higher prices under decontrol, Northeastern residual oil consumers would pay an additional \$1.26 and lose a partial entitlements benefit of \$2.50 for a total disadvantage of \$3.76 per barrel.

An alternative import fee proposal would levy an import fee only on imports above a defined historical level for each imported product. This would have the advantage of minimum consumer impact as, under these conditions, the marginal barrel of oil product would be a domestic barrel. A further advantage of the incremental import fee is that it would not apply to residual oil imports to the Northeastern States if imports at or below historical levels were maintained. There are, however, two major disadvantages. The first is an administrative one. The difficulty lies in the mechanics of the determination of the identity of the particular importers who are importing over the historical limit. The second difficulty is of a character well-known to DOE administrators. The assignment of historical import limits to individual importers freezes the import picture at the time chosen as the historical reference point in spite of changing business conditions and tends to freeze out new enterprise.

Another policy alternative is to impose import quotas on the entry of foreign oil products above historical levels. This would not be without potential costs to the consumers. In the event of an oil product shortage, it would not permit the easing of the shortage through import increases. This would enable marketers to raise prices by substantial amounts for the artificially scarce commodities. The quota system would also share the defects of the incremental import fee proposal. It would tend to freeze the industry into the mold of the existing situation at the time chosen as the historical reference point.

An alternative to an import fee or quota on foreign oil products that is being advanced in the industry is that of loan guarantees, tax credits in the form of accelerated depreciation, and outright grants for the costs of refinery modernization. S. 1684 would restrict these benefits to independent refiners having throughput capacities below specified limits. Other proposals would make these benefits apply throughout the industry. The general effect of tax benefits to refineries would be to shift the burden from the oil product consumer to the Federal taxpayer.

It is not clear how tax benefits for the refining industry would prevent a large increase of oil products imports when import entitlements benefits disappear when crude oil decontrol becomes total. A cost differential between domestically refined oil products refined abroad would still persist in spite of the tax benefits to domestic refiners.

It is not possible to pursue this subject much further until the details of the new Administration's "reindustrialization" program are spelled out. It is likely that the needed modernization of older U.S. refineries will receive large tax benefits along with similar tax benefits for the rest of general industry undertaking modernization. A double benefit for the oil refinery industry would then ensue.

A new bill, the Oil Price Control Act of 1980, H.R. 8401, was introduced by Congressman John Conyers on December 2, 1980. This bill addresses many of the issues involved in oil import policy relevant to the problems of the domestic refining industry which will arise when crude oil controls are abandoned.

In conclusion, it is not possible to arrive at a definitive domestic refinery policy until the energy program of the new Administration has been submitted to Congress. The present statement is confined to an identification of the issues involved and an analysis of current proposals.

[Whereupon, at 12:15 p.m., the hearing was adjourned.]

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